DATA SHEET 2023

- QUARTZ CRYSTALS & OSCILLATORS

- MHz SMD Crystal
- MHz Thru Hole Crystal
- KHz SMD Crystal
- KHz Thru Hole Crystal
- MHz SMD Oscillator
- MHz Thru Hole Oscillator
- KHz SMD Oscillator

NextGen Components,Inc.

NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CM12**

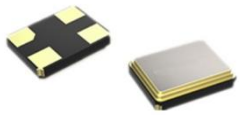
MHZ SMD CRYSTAL

MAIN FEATURE

- Ultra-small SMD Package, Seam Sealed Ceramic-Metal, 4pads
- High precision & High frequency stability

RFQ
Request For Quotation

NEW



L1.2*W1.0*H0.33mm

APPLICATION

- Small Bluetooth & wireless device • IoT, Health care equipment

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	26.00		96.00	MHz	
Oscillation Mode	AT Fund.				
Frequency Tolerance	-	±50		ppm@25 °C	See p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	See p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance(CL)	-	18	-	pF	See p/n guide for more option
Frequency Stability	-	±50	-	ppm	See p/n guide for more option
Equivalent Series Resistance (ESR)			150	ohm	@26.000 ~ 32.0MHz
			80		@32.001~40.00MHz
			60		@40.001~96.00MHz
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±3		ppm	@25 °C

PART NUMBER GUIDE

Example: CM12 48M0A50-18-50-40-80 TLF

CM12	48M0	A	50	-18	-50	-40	-80	T	LF	XX
1	2	3	4	5	6	7	8	9	10	11

1) CM12: MHz SMD Crystal,4 pads, L1.2*W1.0*H0.33mm

2) 48M0: Frequency Range 48.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 80: Equivalent Series Resistance (ESR), 80: 80 ohm Max.

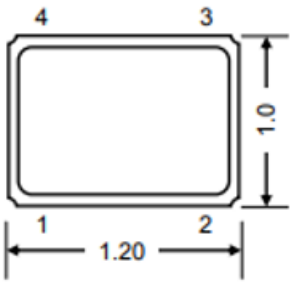
9) T: Package in Tape/Reel, 5000pcs/Reel

10) LF: RoHS Compliant

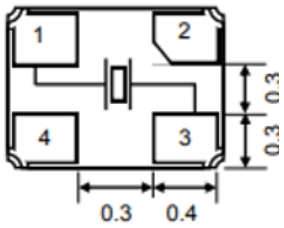
11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm)

Top View



Bottom View



Connection

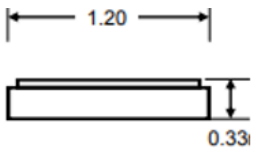
#1 Crystal

#2 Ground

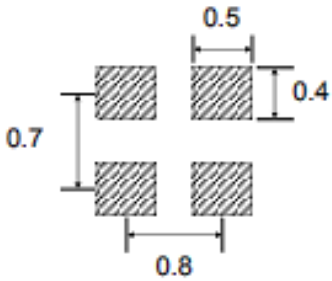
#3 Crystal

#4 Ground

Side View



Solder Pattern



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CM11**

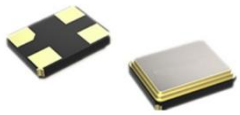
MHZ SMD CRYSTAL

MAIN FEATURE

- Ultra-small SMD Package, Seam Sealed Ceramic-Metal, 4pads
- High precision & High frequency stability

RFQ
Request For Quotation

NEW



APPLICATION

- Small Bluetooth & wireless device • IoT, Health care equipment

RoHS COMPLIANT

100% QUALITY

L1.6*W1.2*H0.40mm

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	24.00		96.00	MHz	
Oscillation Mode	AT Fund.				
Frequency Tolerance	-	±50		ppm@25 °C	See p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	See p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance(CL)	-	18	-	pF	See p/n guide for more option
Frequency Stability	-	±50	-	ppm	See p/n guide for more option
Equivalent Series Resistance (ESR)			150	ohm	@24.000 ~ 32.0MHz
			100		@32.001~38.00MHz
			80		@38.001~96.00MHz
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±3		ppm	@25 °C

PART NUMBER GUIDE

Example: CM11 48M0A50-18-50-40-80 TLF

CM11	48M0	A	50	-18	-50	-40	-80	T	LF	XX
1	2	3	4	5	6	7	8	9	10	11

1) CM11: MHz SMD Crystal,4 pads, L1.6*W1.2*H0.40mm

2) 48M0: Frequency Range 48.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 80: Equivalent Series Resistance (ESR), 80: 80 ohm Max.

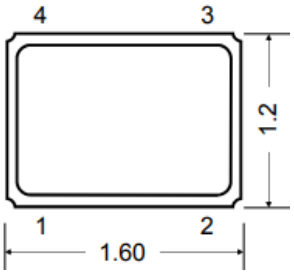
9) T: Package in Tape/Reel, 3000pcs/Reel

10) LF: RoHS Compliant

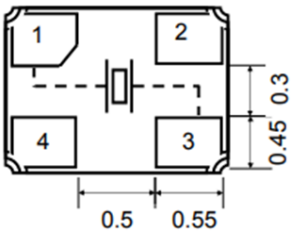
11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm)

Top View



Bottom View



Connection

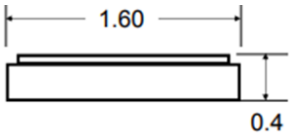
#1 Crystal

#2 Ground

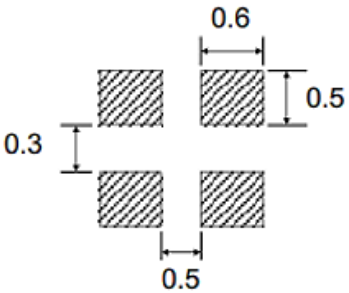
#3 Crystal

#4 Ground

Side View



Solder Pattern



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CM21**

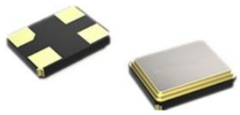
MHZ SMD CRYSTAL

MAIN FEATURE

- Ultra-small SMD Package, Seam Sealed Ceramic-Metal, 4pads
- High precision & High frequency stability

RFQ
Request For Quotation

NEW



L2.0*W1.6*H0.46mm

APPLICATION

- Small Bluetooth & wireless device • IoT, Health care equipment

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	16.000		54.000	MHz	
Oscillation Mode	AT Fund.				
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance(CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			150	ohm	@16.000 ~ 20.000MHz
			100		@20.001~30.000MHz
			80		@30.001~36.000MHz
			60		@36.001~54.000MHz
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±3		ppm	@25 °C

PART NUMBER GUIDE

Example: CM21 26M0A50-18-50-40-100 TLF

CM21	26M0	A	50	-18	-50	-40	-100	T	LF	XX
1	2	3	4	5	6	7	8	9	10	11

1) CM21: MHz SMD Crystal,4 pads, L2.0*W1.6*H0.46mm

2) 26M0: Frequency Range 26.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 100: Equivalent Series Resistance (ESR), 100: 100 ohm Max.

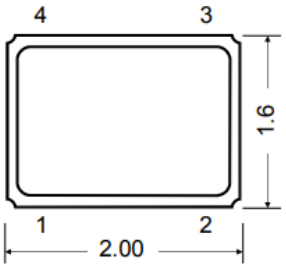
9) T: Package in Tape/Reel, 3000pcs/Reel

10) LF: RoHS Compliant

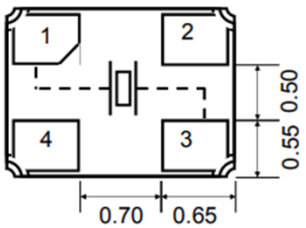
11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm)

Top View



Bottom View



Connection

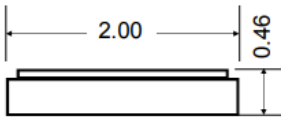
#1 Crystal

#2 Ground

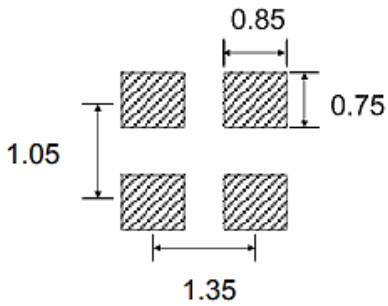
#3 Crystal

#4 Ground

Side View



Solder Pattern



NextGen Components,Inc.

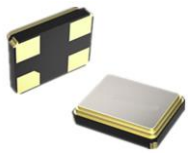
ORIGINAL PART SERIES NO.: **CM22**

MHZ SMD CRYSTAL

MAIN FEATURE

- Ultra-small SMD Package, Seam Sealed Ceramic-Metal, 4pads
- High precision & High frequency stability

RFQ
Request For Quotation



L2.5*W2.0*H0.55mm

APPLICATION

- Small Bluetooth & wireless device • IoT, Health care equipment

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	12.00		66.000	MHz	
Oscillation Mode		AT Fund.			3rd Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			200	ohm	@12.000 ~ 13.000MHz
			150		@13.001~16.000MHz
			80		@16.001~20.000MHz
			60		@20.001~30.000MHz
			50		@30.001~35.000MHz
			40		@35.001~66.000MHz, 3rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±5		ppm	@25 °C

PART NUMBER GUIDE

Example: CM22 24M0A50-18-50-40-60 TLF

CM22	24M0	A	50	-18	-50	-40	-60	T	LF	XX
1	2	3	4	5	6	7	8	9	10	11

1) CM22: MHz SMD Crystal,4 pads, L2.5*W2.0*H0.55mm

2) 24M0: Frequency Range 24.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 60: Equivalent Series Resistance (ESR), 60: 60 ohm Max.

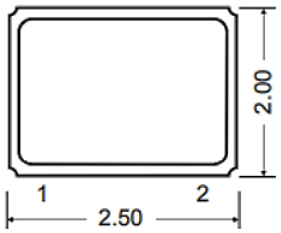
9) T: Package in Tape/Reel, 3000pcs/Reel

10) LF: RoHS Compliant

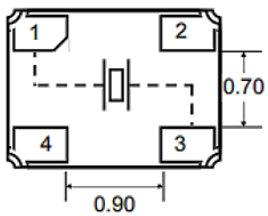
11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm)

Top View



Bottom View



Connection

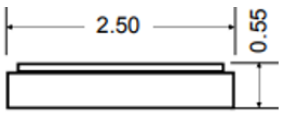
#1 Crystal

#2 Ground

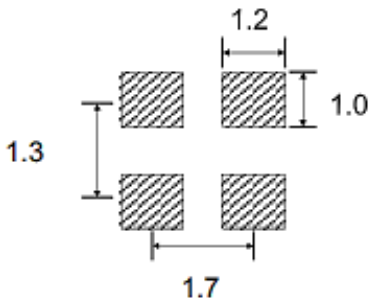
#3 Crystal

#4 Ground

Side View



Solder Pattern



NextGen Components,Inc.

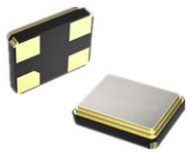
ORIGINAL PART SERIES NO.: **CM32**

MHZ SMD CRYSTAL

MAIN FEATURE

- Ultra-small SMD Package, Seam Sealed Ceramic-Metal, 4pads
- High precision & High frequency stability

RFQ
Request For Quotation



L3.2*W2.5*H0.70mm

APPLICATION

- Small Bluetooth & wireless device • IoT, Health care equipment

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	8.000		125.00	MHz	
Oscillation Mode	AT Fund.				3RD Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			350	ohm	@8.000 ~ 10.000MHz
			100		@10.001~16.000MHz
			80		@16.001~19.000MHz
			60		@19.001~30.000MHz
			40		@30.001~54.000MHz
			100		@54.001~125.00MHz, 3rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±5		ppm	@25 °C

PART NUMBER GUIDE

Example: CM32 24M0A50-18-50-40-60 TLF

CM32	24M0	A	50	-18	-50	-40	-60	T	LF	XX
1	2	3	4	5	6	7	8	9	10	11

1) CM32: MHz SMD Crystal,4 pads, L3.2*W2.5*H0.70mm

2) 24M0: Frequency Range 24.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 60: Equivalent Series Resistance (ESR), 60: 60 ohm Max.

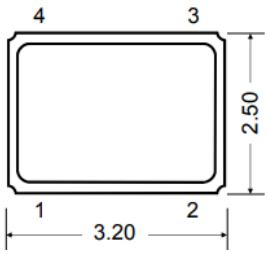
9) T: Package in Tape/Reel, 3000pcs/Reel

10) LF: RoHS Compliant

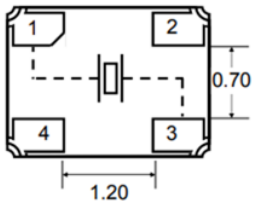
11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm)

Top View



Bottom View



Connection

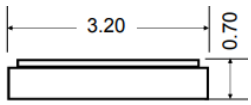
#1 Crystal

#2 Ground

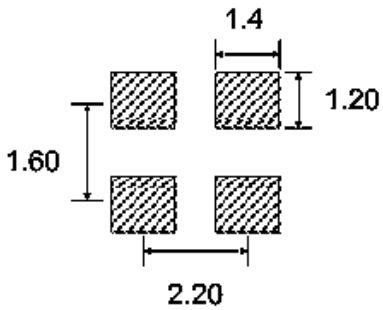
#3 Crystal

#4 Ground

Side View



Solder Pattern



NextGen Components,Inc.

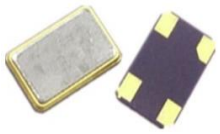
ORIGINAL PART SERIES NO.: **CM53**

MHZ SMD CRYSTAL

MAIN FEATURE

- Ultra-small SMD Package, Seam Sealed Ceramic-Metal, 4pads
- High precision & High frequency stability

RFQ
Request For Quotation



L5.0*W3.2*H1.0mm

APPLICATION

- Small Bluetooth & wireless device • IoT, Health care equipment

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	8.000		150.00	MHz	
Oscillation Mode		AT Fund.			3RD Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			150	ohm	@8.000 ~ 10.000MHz
			100		@10.001~15.000MHz
			50		@15.001~40.000MHz
			40		@40.001~52.000MHz
			100		@40.001~80.000MHz, 3rd OT
			80		@80.001~150.00MHz, 3rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±5		ppm	@25 °C

PART NUMBER GUIDE

Example: CM53 24M0A50-18-50-40-50 TLF

CM53	24M0	A	50	-18	-50	-40	-50	T	LF	XX
1	2	3	4	5	6	7	8	9	10	11

1) CM53: MHz SMD Crystal,4 pads, L5.0*W3.2*H1.0mm

2) 24M0: Frequency Range 24.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 50: Equivalent Series Resistance (ESR), 60: 60 ohm Max.

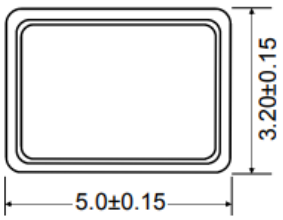
9) T: Package in Tape/Reel, 1000pcs/Reel

10) LF: RoHS Compliant

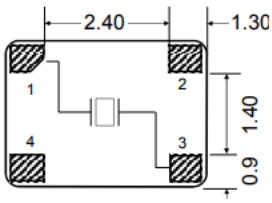
11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm)

Top View



Bottom View



Connection

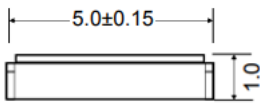
#1 Crystal

#2 Ground

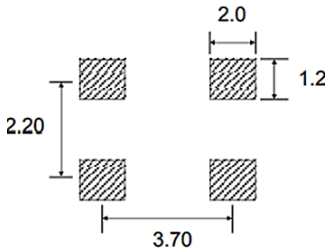
#3 Crystal

#4 Ground

Side View



Solder Pattern



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CM63**

MHZ SMD CRYSTAL

MAIN FEATURE

- Ultra-small SMD Package, Seam Sealed Ceramic-Metal, 4pads
- High precision & High frequency stability

RFQ
Request For Quotation

L6.0*W3.5*H1.0mm

APPLICATION

- Small Bluetooth & wireless device • IoT, Health care equipment

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	7.000		50.00	MHz	
Oscillation Mode	AT Fund.				3RD Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			100	ohm	@7.000 ~ 8.000MHz
			60		@8.001~10.000MHz
			50		@10.001~14.000MHz
			40		@14.001~20.000MHz
			30		@20.001~50.000MHz
			80		@40.001~50.00MHz, 3rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±5		ppm	@25 °C

PART NUMBER GUIDE

Example: CM63 24M0A50-18-50-40-30 TLF

CM63	24M0	A	50	-18	-50	-40	-30	T	LF	XX
1	2	3	4	5	6	7	8	9	10	11

1) CM63: MHz SMD Crystal, 4 pads, L6.0*W3.5*H1.0mm

2) 24M0: Frequency Range 24.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 30: Equivalent Series Resistance (ESR), 30: 30 ohm Max.

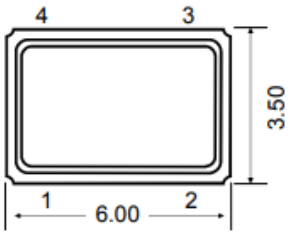
9) T: Package in Tape/Reel, 1000pcs/Reel

10) LF: RoHS Compliant

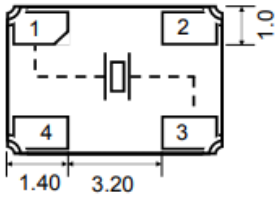
11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm, Tole: +/-0.2mm)

Top View

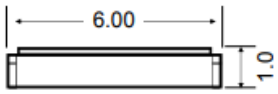


Bottom View

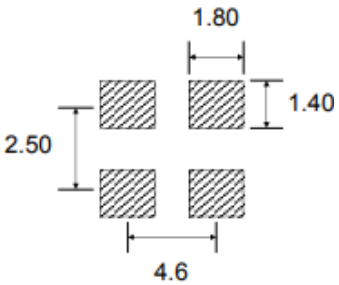


Connection
#1 Crystal
#2 Ground
#3 Crystal
#4 Ground

Side View



Solder Pattern



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CSM2**

MHZ SMD CRYSTAL

MAIN FEATURE

• Low cost and short lead time • Wide Frequency Range

RFQ
Request For Quotation

APPLICATION

• PC, TV and all kind of consumer electronics products

L11.5*W4.75*H4.0mm

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	3.000		150.00	MHz	
Oscillation Mode		AT Fund.			3RD Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			150	ohm	@3.000 ~ 4.000MHz
			120		@4.001 ~ 6.000MHz
			80		@6.001 ~ 10.000MHz
			60		@10.001 ~ 54.000MHz
			80		@30.001 ~ 40.000MHz, 3rd OT
			70		@40.001 ~ 150.00MHz, 3rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±5		ppm	@25 °C

PART NUMBER GUIDE

Example: CSM2 4M0A50-18-50-40-150 TLF

CSM2	4M0	A	50	-18	-50	-40	-150	T	LF	XX
1	2	3	4	5	6	7	8	9	10	11

1) CSM2: MHz SMD Crystal, 2 pads, L11.5*W4.75*H4.0mm

2) 4M0: Frequency Range 4.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 150: Equivalent Series Resistance (ESR), 150: 150 ohm Max.

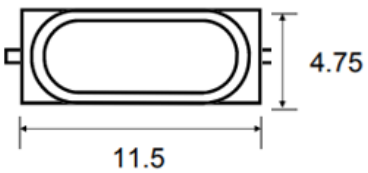
9) T: Package in Tape/Reel, 1000pcs/Reel

10) LF: RoHS Compliant

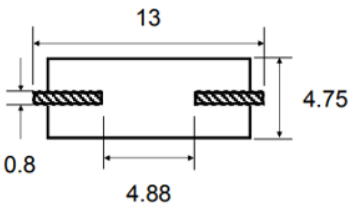
11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm, Tol.: +/-0.2mm)

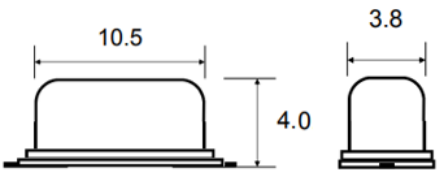
Top View



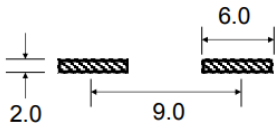
Bottom View



Side View



Solder Pattern



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CSSM2**

MHZ SMD CRYSTAL

MAIN FEATURE

• Low cost and short lead time • Wide Frequency Range

RFQ
Request For Quotation

APPLICATION

• PC, TV and all kind of consumer electronics products

L11.5*W4.75*H3.0mm

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	3.000		150.00	MHz	
Oscillation Mode		AT Fund.			3RD Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			150	ohm	@3.000 ~ 4.000MHz
			120		@4.001 ~ 6.000MHz
			80		@6.001 ~ 10.000MHz
			60		@10.001 ~ 54.000MHz
			80		@30.001 ~ 40.000MHz, 3rd OT
			70		@40.001 ~ 150.00MHz, 3rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±5		ppm	@25 °C

PART NUMBER GUIDE

Example: CSSM2 16M0A50-18-50-40-60 TLF

CSSM2	16M0	A	50	-18	-50	-40	-60	T	LF	XX
1	2	3	4	5	6	7	8	9	10	11

1) CSSM2: MHz SMD Crystal, 2 pads, L11.5*W4.75*H3.0mm

2) 16M0: Frequency Range 16.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 60: Equivalent Series Resistance (ESR), 60: 60 ohm Max.

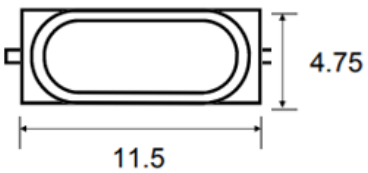
9) T: Package in Tape/Reel, 1000pcs/Reel

10) LF: RoHS Compliant

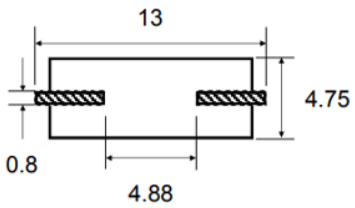
11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm, Tol.: +/-0.2mm)

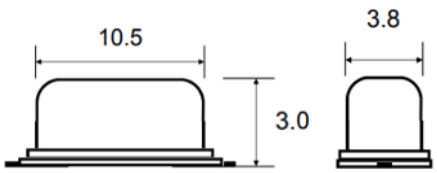
Top View



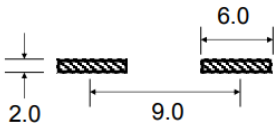
Bottom View



Side View



Solder Pattern



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CSSM5**

MHZ SMD CRYSTAL

MAIN FEATURE

• Low cost and short lead time • Wide Frequency Range

RFQ

Request For Quotation

APPLICATION

• PC, TV and all kind of consumer electronics products

L11.5*W4.70*H2.6mm

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	3.000		150.00	MHz	
Oscillation Mode		AT Fund.			3RD Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			150	ohm	@3.000 ~ 4.000MHz
			120		@4.001 ~ 6.000MHz
			80		@6.001 ~ 10.000MHz
			60		@10.001 ~ 54.000MHz
			80		@30.001 ~ 40.000MHz, 3rd OT
			70		@40.001 ~ 150.00MHz, 3rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±5		ppm	@25 °C

PART NUMBER GUIDE

Example: CSSM5 16M0A50-18-50-40-60 TLF

CSSM5	16M0	A	50	-18	-50	-40	-60	T	LF	XX
1	2	3	4	5	6	7	8	9	10	11

1) CSSM5: MHz SMD Crystal, 2 pads, L11.5*W4.70*H2.6mm

2) 16M0: Frequency Range 16.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 60: Equivalent Series Resistance (ESR), 60: 60 ohm Max.

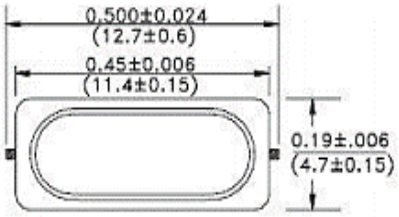
9) T: Package in Tape/Reel, 1000pcs/Reel

10) LF: RoHS Compliant

11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

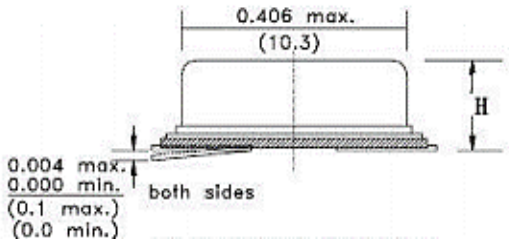
DIMENSION (Unit: Inch/mm)

Top View



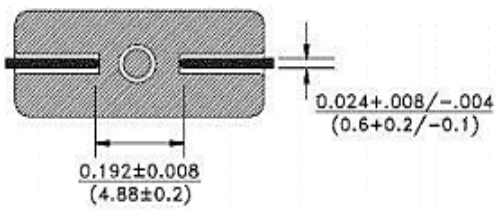
Marking
Line 1: Frequency Range

Side View

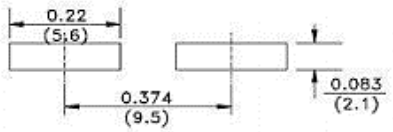


H: 2.6 Max.

Bottom View



Recommend Pad Layout



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CCME**

MHZ SMD CRYSTAL

MAIN FEATURE

• Low cost and short lead time • Wide Frequency Range

RFQ
Request For Quotation

APPLICATION

• PC, TV and all kind of consumer electronics products

RoHS3 Compliant
RoHS Annex III lead Exemption
(exempt per RoHS EU 2015/863)

L12.5*W4.6*H3.7mm

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	3.570		70.00	MHz	
Oscillation Mode		AT Fund.			3RD Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			150	ohm	@3.5700 ~ 5.000MHz
			120		@5.001 ~ 10.000MHz
			80		@6.001 ~ 16.000MHz
			40		@16.001 ~ 36.00MHz
			100		@30.001 ~ 36.00MHz, 3rd OT
			80		@40.001 ~ 70.00MHz, 3rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±5		ppm	@25 °C

PART NUMBER GUIDE

Example: CCME 16M0A50-18-50-40-80 TLH

CCME	16M0	A	50	-18	-50	-40	-80	T	LH	XX
1	2	3	4	5	6	7	8	9	10	11

1) CCME: MHz SMD Crystal, 4 pads, L12.5*W4.6*H3.7mm

2) 16M0: Frequency Range 16.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 80: Equivalent Series Resistance (ESR), 80: 80 ohm Max.

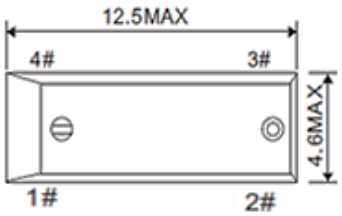
9) T: Package in Tape/Reel, 1000pcs/Reel

10) LH: RoHS Compliant, RoHS Annex III lead Exemption (exempt per RoHS EU 2015/863

11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

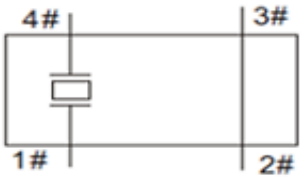
DIMENSION (Unit: mm, Tol.: +/-0.2mm)

Top View

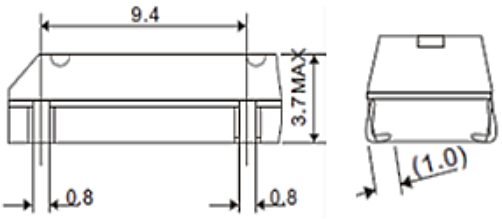


Connection
#1 Crystal
#2 Ground
#3 Crystal
#4 Ground

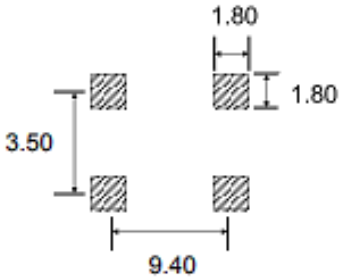
Bottom View



Side View



Solder Pattern



NextGen Components,Inc.

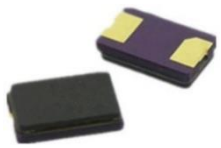
ORIGINAL PART SERIES NO.: **CMG532**

MHZ SMD CRYSTAL

MAIN FEATURE

• Low cost and short lead time • Glass seal, 2 pads

RFQ
Request For Quotation



APPLICATION

• PC, TV and all kind of consumer electronics products

RoHS3 Compliant
RoHS Annex III lead Exemption
(exempt per RoHS EU 2015/863)

L5.0*W3.2*H1.2mm

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	8.0		80.00	MHz	
Oscillation Mode		AT Fund.			3RD Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			80	ohm	@8.000 ~ 12.00MHz
			70		@12.001 ~ 20.00MHz
			60		@20.001 ~ 40.000MHz
			50		@40.001 ~ 50.00MHz
			120		@40.000 ~ 60.00MHz, 3rd OT
			100		@60.001 ~ 80.00MHz, 3rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±3		ppm	@25 °C

PART NUMBER GUIDE

Example: CMG532 16M0A50-18-50-40-70 TLH

CMG532	16M0	A	50	-18	-50	-40	-70	T	LH	XX
1	2	3	4	5	6	7	8	9	10	11

1) CMG532: MHz SMD Crystal, Glass Seal, L5.0*W3.2*H1.2mm, 2 pads

2) 16M0: Frequency Range 16.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 70: Equivalent Series Resistance (ESR), 70: 70 ohm Max.

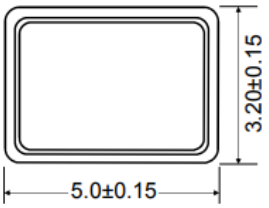
9) T: Package in Tape/Reel, 1000pcs/Reel

10) LH: RoHS Compliant, RoHS Annex III lead Exemption (exempt per RoHS EU 2015/863

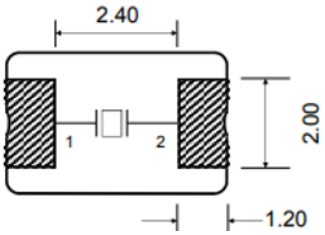
11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm, Tol.: +/-0.15mm)

Top View



Bottom View

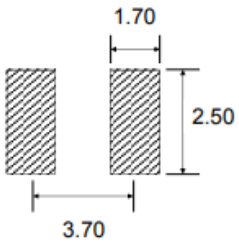


Connection
#1 Crystal

#2 Crystal

Side View

Solder Pattern



NextGen Components,Inc.

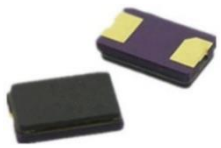
ORIGINAL PART SERIES NO.: **CMG632**

MHZ SMD CRYSTAL

MAIN FEATURE

• Low cost and short lead time • Glass seal, 2 pads

RFQ
Request For Quotation



APPLICATION

• PC, TV and all kind of consumer electronics products

RoHS3 Compliant
RoHS Annex III lead Exemption
(exempt per RoHS EU 2015/863)

L6.0*W3.5*H1.2mm

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	8.0		100.00	MHz	
Oscillation Mode		AT Fund.			3RD Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			80	ohm	@8.000 ~ 12.00MHz
			70		@12.001 ~ 20.00MHz
			60		@20.001 ~ 40.000MHz
			50		@40.001 ~ 50.00MHz
			120		@40.000 ~ 60.00MHz, 3rd OT
			100		@60.001 ~ 80.00MHz, 3rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±3		ppm	@25 °C

PART NUMBER GUIDE

Example: CMG632 16M0A50-18-50-40-70 TLH

CMG632	16M0	A	50	-18	-50	-40	-70	T	LH	XX
1	2	3	4	5	6	7	8	9	10	11

1) CMG632: MHz SMD Crystal, Glass Seal, L6.0*W3.5*H1.2mm, 2 pads

2) 16M0: Frequency Range 16.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 70: Equivalent Series Resistance (ESR), 70: 70 ohm Max.

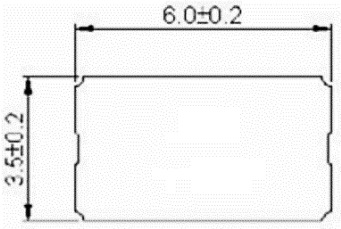
9) T: Package in Tape/Reel, 1000pcs/Reel

10) LH: RoHS Compliant, RoHS Annex III lead Exemption (exempt per RoHS EU 2015/863

11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

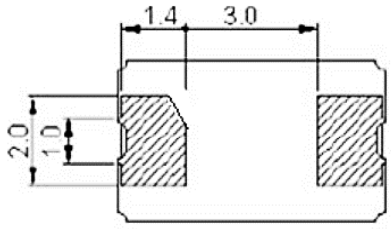
DIMENSION (Unit: mm, +/-0.2mm)

Top View



Marking
Frequency Range
or Internal control
code

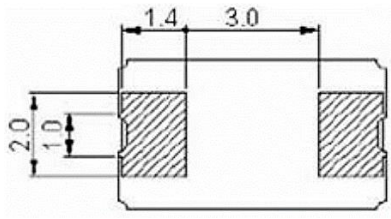
Bottom type 1 View



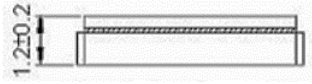
Pin Configuration
#1 Crystal
#2 Crystal

OR

Bottom Type 2 View



Side View



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CCC**

MHZ THRU- HOLE CRYSTAL

MAIN FEATURE

• Low cost and short lead time • Wide Frequency Range

RFQ
Request For Quotation

APPLICATION

• PC, TV and all kind of consumer electronics products

Ø2.0*H6.0mm

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	4.0		60.00	MHz	
Oscillation Mode		AT Fund.			3RD Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			150	ohm	@4.000 ~ 5.00MHz
			120		@5.001 ~ 7.00MHz
			80		@7.001 ~ 10.000MHz
			60		@10.001 ~ 12.00MHz
			40		@12.001 ~ 30.00MHz
			80		@30.000 ~ 60.00MHz, 3rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±3		ppm	@25 °C

PART NUMBER GUIDE

Example: CCC 8M0A50-18-50-40-80 BLF

CCC	8M0	A	50	-18	-50	-40	-80	B	LF	XX
1	2	3	4	5	6	7	8	9	10	11

1) CCC: MHz SMD Crystal, 2 pins, Ø2.0*H6.0mm

2) 8M0: Frequency Range 8.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 80: Equivalent Series Resistance (ESR), 80: 80 ohm Max.

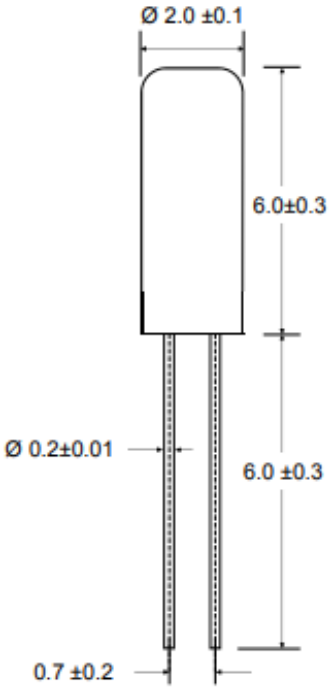
9) B: Package in bulk

10) LF: RoHS Compliant

11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm)

Side View



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CCD**

MHZ THRU- HOLE CRYSTAL

MAIN FEATURE

• Low cost and short lead time • Wide Frequency Range

RFQ
Request For Quotation

Ø3.1*H8.3mm

APPLICATION

• PC, TV and all kind of consumer electronics products

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	4.0		60.00	MHz	
Oscillation Mode		AT Fund.			3RD Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			150	ohm	@4.000 ~ 5.00MHz
			120		@5.001 ~ 7.00MHz
			80		@7.001 ~ 10.000MHz
			60		@10.001 ~ 12.00MHz
			40		@12.001 ~ 30.00MHz
			80		@30.000 ~ 60.00MHz, 3rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±3		ppm	@25 °C

PART NUMBER GUIDE

Example: CCD 8M0A50-18-50-40-80 BLF

CCD	8M0	A	50	-18	-50	-40	-80	B	LF	XX
1	2	3	4	5	6	7	8	9	10	11

1) CCD: MHz SMD Crystal, 2 pins, Ø3.1*H8.3mm

2) 8M0: Frequency Range 8.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 80: Equivalent Series Resistance (ESR), 80: 80 ohm Max.

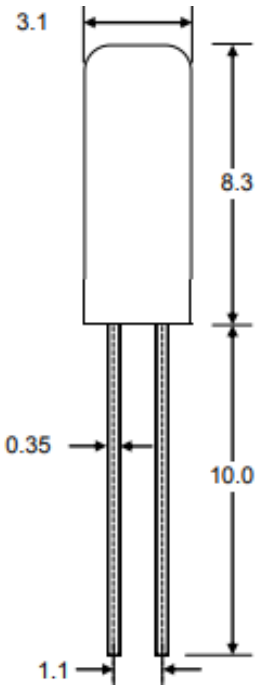
9) B: Package in bulk

10) LF: RoHS Compliant

11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm, Tol. : +/-0.20mm)

Side View



MHZ THRU- HOLE CRYSTAL

MAIN FEATURE

• Low cost and short lead time • Wide Frequency Range

RFQ
Request For Quotation

L11.05*W4.7*H4.0mm

APPLICATION

• PC, TV and all kind of consumer electronics products

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	3.0		100.00	MHz	
Oscillation Mode		AT Fund.			3RD Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			200	ohm	@3.000 ~ 5.0000MHz
			80		@5.001 ~ 10.000MHz
			60		@10.001 ~ 20.000MHz
			40		@20.001 ~ 36.00MHz
			100		@27.001 ~ 50.00MHz, 3rd OT
			80		@50.01 ~ 100.00MHz, 3rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±3		ppm	@25 °C

PART NUMBER GUIDE

Example: CS 8M0A50-18-50-40-80 BLF

CS	8M0	A	50	-18	-50	-40	-80	B	LF	XX
1	2	3	4	5	6	7	8	9	10	11

1) CS: MHz SMD Crystal, 2 pins, L11.05*W4.7*H4.0mm

2) 8M0: Frequency Range 8.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 80: Equivalent Series Resistance (ESR), 80: 80 ohm Max.

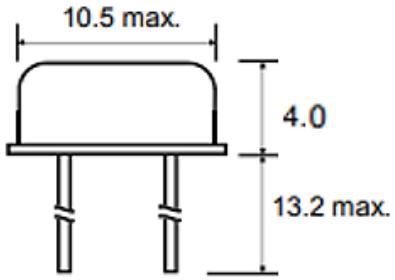
9) B: Package in bulk

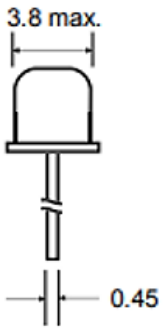
10) LF: RoHS Compliant

11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

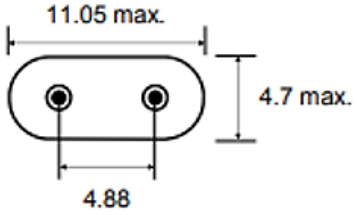
DIMENSION (Unit: mm))

Side View





Bottom View



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CSS**

MHZ THRU- HOLE CRYSTAL

MAIN FEATURE

• Low cost and short lead time • Wide Frequency Range

RFQ
Request For Quotation

L11.05*W4.7*H3.0mm

APPLICATION

• PC, TV and all kind of consumer electronics products

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	3.0		100.00	MHz	
Oscillation Mode		AT Fund.			3RD Overtone Option
Frequency Tolerance	-	±50		ppm@25 °C	see p/n guide for more option
Operating Temp. Range	-40	-	+85	°C	see p/n guide for more option
Storage Temp. Range	-55	-	+125	°C	
Load Capacitance (CL)	-	18	-	pF	see p/n guide for more option
Frequency Stability	-	±50	-	ppm	see p/n guide for more option
Equivalent Series Resistance (ESR)			200	ohm	@3.000 ~ 5.0000MHz
			80		@5.001 ~ 10.000MHz
			60		@10.001 ~ 20.000MHz
			40		@20.001 ~ 36.00MHz
			100		@27.001 ~ 50.00MHz, 3rd OT
			80		@50.01 ~ 100.00MHz, 3rd OT
Drive Level	-	-	100	µW	
Shunt Capacitance	-	-	7.0	pF	
Insulation Resistance	500	-		mW	DC/100V +-10%
Aging per year	-	±3		ppm	@25 °C

PART NUMBER GUIDE

Example: CSS 8M0A50-18-50-40-80 BLF

CSS	8M0	A	50	-18	-50	-40	-80	B	LF	XX
1	2	3	4	5	6	7	8	9	10	11

1) CSS: MHz SMD Crystal, 2 pins, L11.05*W4.7*H3.0mm

2) 8M0: Frequency Range 8.000MHz or specify frequency range

3) A: Oscillation Mode, A: AT Fund.

4) 50: Freq. tolerance, 50: +/-50ppm; 10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

5) 18: Load Capacitance(CL), 15: 15pF; 18: 18pF; 20: 20pF; 30: 30pF or Specify CL value

6) 50: Frequency Stability, 50: +/-50ppm;10: +/-10ppm; 20: +/-20ppm; 30: +/-30ppm or Specify value

7) 40: Operating Temp. Range, 40: -40°C ~+85°C; 10: -10°C ~+60°C; 20: -20°C ~+70°C; or Specify value

8) 80: Equivalent Series Resistance (ESR), 80: 80 ohm Max.

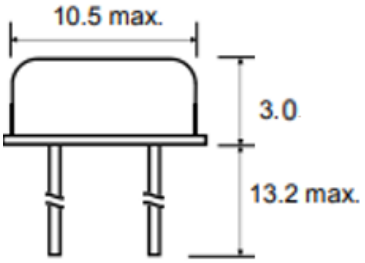
9) B: Package in bulk

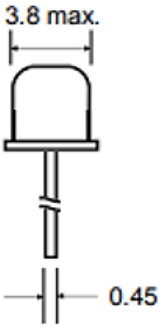
10) LF: RoHS Compliant

11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

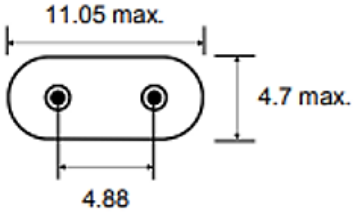
DIMENSION (Unit: mm))

Side View





Bottom View



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CCMV**

KHZ SMD CRYSTAL

MAIN FEATURE

• 32.768KHz • Ultra-Small Package • 2 Pads

RFQ
Request For Quotation

APPLICATION

• Smart phone and mobile communication and more

L1.6*W1.0*H0.5mm

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	-	32.768	-	KHz	
Oscillation Mode		AT Fund.			
Frequency Tolerance	-	±20		ppm	@25 °C or Specify
Operating Temperature Range	-40	-	+85	°C	
Storage Temperature Range	-55	-	+125	°C	
Load Capacitance (CL)	-	12.5	-	pF	
Frequency/Temp Coefficient	-0.04	-0.03	-0.02	ppm/C²	
Turnover Temp	+20	+25	+30	°C	
Equivalent Series Resistance		-	90	Kohm	CL: 7.0, 9.0pF or Specify
Drive Level	-	0.1	0.5	µW	
Shunt Capacitance		1.4	7.0	pF	
Dynamic Capacitance	-	-	6.0	Ff	
Quality Factor		10000			
Capacitance Ratio	-	450	-		
Aging per year	-	±3		ppm/year	
Insulation Resistance	500	-	-	Mohm	@ 100Vdc ± 15V

PART NUMBER GUIDE

Example: CCMV 32K768A20-12.5-40-90 TLF

CCMV	32K768	A	20	-12.5	-40	-90	T	LF	XX
1	2	3	4	5	6	7	8	9	10

1) CCMV: KHz SMD Crystal, L1.6*W1.0*H0.5mm

2) 32K768: Frequency Range 32.768KHz

3) A: Oscillation Mode, A: AT Fund.

4) 20: Freq. tolerance, 20: +/-20ppm

5) 12.5: Load Capacitance(CL), 12.5: 12.5pF or Specify CL value

6) 40: Operating Temp. Range, 40: -40°C ~+85°C

7) 90: Equivalent Series Resistance (ESR), 90: 90 Kohm Max.

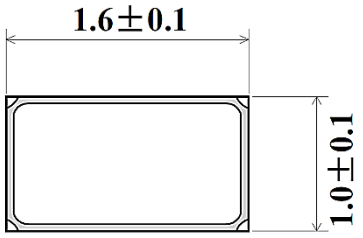
8) T: Package in Tape/Reel, 5000pcs/Reel

9) LF: RoHS Compliant

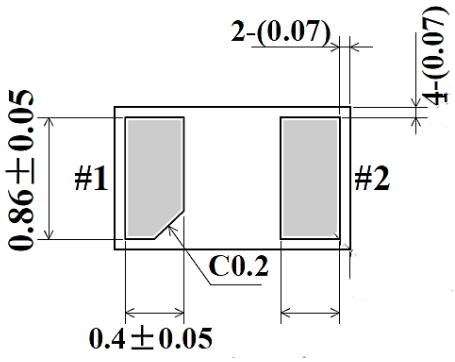
10) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm)

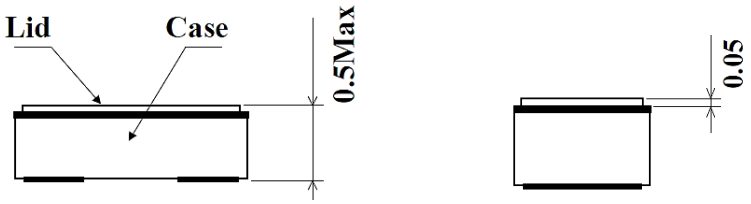
Top View



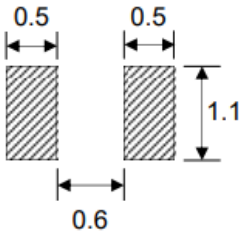
Bottom View



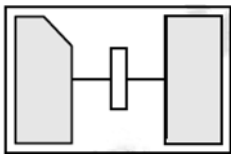
Side View



Solder Pattern



Internal Connection



<Top View>

NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CCMS**

KHZ SMD CRYSTAL

MAIN FEATURE

• 32.768KHz • Ultra-Small Package • 2 Pads

RFQ
Request For Quotation

APPLICATION

• Smart phone and mobile communication and more

L2.0*W1.2*H0.6mm

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	-	32.768	-	KHz	
Oscillation Mode		AT Fund.			
Frequency Tolerance	-	±20		ppm	@25 °C or Specify
Operating Temperature Range	-40	-	+85	°C	CL: 7.0pF, 9.0pF or Specify
Storage Temperature Range	-55	-	+125	°C	
Load Capacitance (CL)	-	12.5	-	pF	
Frequency/Temp Coefficient	0.028	0.034	0.04	ppm/C²	
Turnover Temp	+20	+25	+30	°C	
Equivalent Series Resistance		-	90	Kohm	
Drive Level	-	-	0.5	µW	
Shunt Capacitance	0.9	1.3	2.0	pF	
Dynamic Capacitance	-	5.0	-	Ff	
Quality Factor		60000			
Capacitance Ratio	-	450	-		
Aging per year	-	±3		ppm/year	
Insulation Resistance	500	-	-	Mohm	@ 100Vdc ± 15V

PART NUMBER GUIDE

Example: CCMS 32K768A20-12.5-40-90 TLF

CCMS	32K768	A	20	-12.5	-40	-90	T	LF	XX
1	2	3	4	5	6	7	8	9	10

1) CCMS: KHz SMD Crystals L2.0*W1.2*H0.6mm

2) 32K768: Frequency Range 32.768KHz

3) A: Oscillation Mode, A: AT Fund.

4) 20: Freq. tolerance, 20: +/-20ppm

5) 12.5: Load Capacitance(CL), 12.5: 12.5pF or Specify CL value

6) 40: Operating Temp. Range, 40: -40°C ~+85°C

7) 90: Equivalent Series Resistance (ESR), 90: 90 Kohm Max.

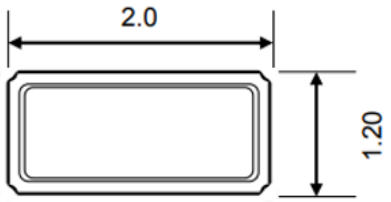
8) T: Package in Tape/Reel, 5000pcs/Reel

9) LF: RoHS Compliant

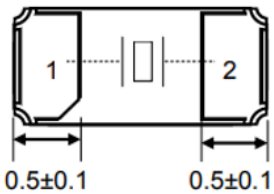
10) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm)

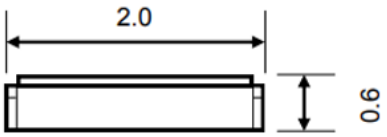
Top View



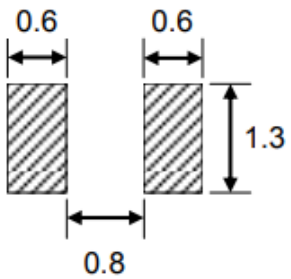
Bottom View



Side View



Solder Pattern



NextGen Components,Inc.

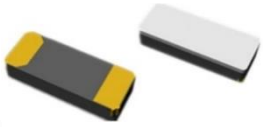
ORIGINAL PART SERIES NO.: **CCMM**

KHZ SMD CRYSTAL

MAIN FEATURE

• 32.768KHz • Ultra-Small Package • 2 Pads

RFQ
Request For Quotation



APPLICATION

• Smart phone and mobile communication and more

L3.2*W1.5*H0.80mm

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	-	32.768	-	KHz	
Oscillation Mode		AT Fund.			
Frequency Tolerance	-	±20		ppm	@25 °C or Specify
Operating Temperature Range	-40	-	+85	°C	CL: 6.0pF. 7.0pF, 9.0pF, available or Specify
Storage Temperature Range	-55	-	+125	°C	
Load Capacitance (CL)	-	12.5	-	pF	
Frequency/Temp Coefficient	-	-	0.04	ppm/C²	
Turnover Temp	+20	+25	+30	°C	
Equivalent Series Resistance		-	70	Kohm	
Drive Level	-	-	0.5	µW	
Shunt Capacitance		1.1	2.0	pF	
Dynamic Capacitance	-	4.1	-	Ff	
Quality Factor		60000			
Capacitance Ratio	-	450	-		
Aging per year	-	±3		ppm/year	
Insulation Resistance	500	-	-	Mohm	@ 100Vdc ± 15V

PART NUMBER GUIDE

Example: CCMM 32K768A20-12.5-40-70 TLF

CCMV	32K768	A	20	-12.5	-40	-90	T	LF	XX
1	2	3	4	5	6	7	8	9	10

1) CCMM: KHz SMD Crystals L3.2*W1.5*H0.80mm

2) 32K768: Frequency Range 32.768KHz

3) A: Oscillation Mode, A: AT Fund.

4) 20: Freq. tolerance, 20: +/-20ppm

5) 12.5: Load Capacitance(CL), 12.5: 12.5pF or Specify CL value

6) 40: Operating Temp. Range, 40: -40°C ~+85°C

7) 70: Equivalent Series Resistance (ESR), 70: 70 Kohm Max.

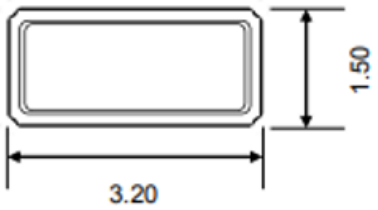
8) T: Package in Tape/Reel, 3000pcs/Reel

9) LF: RoHS Compliant

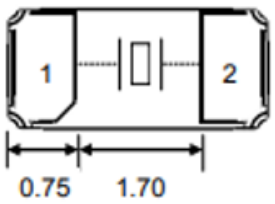
10) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm, Tol.: +/-0.1mm)

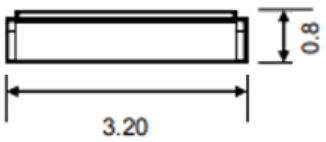
Top View



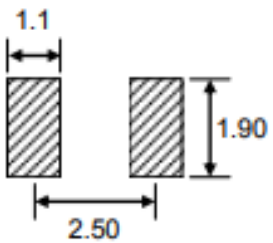
Bottom View



Side View



Solder Pattern



NextGen Components,Inc.

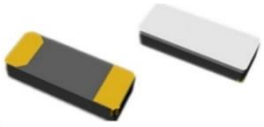
ORIGINAL PART SERIES NO.: **CCMJ**

KHZ SMD CRYSTAL

MAIN FEATURE

• 32.768KHz • Ultra-Small Package • 2 Pads

RFQ
Request For Quotation



APPLICATION

• Smart phone and mobile communication and more

L4.1*W1.5*H0.90mm

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	-	32.768	-	KHz	
Oscillation Mode		AT Fund.			
Frequency Tolerance	-	±20		ppm	@25 °C or Specify
Operating Temperature Range	-40	-	+85	°C	CL: 6.0pF. 7.0pF, 9.0pFavailable or Specify
Storage Temperature Range	-55	-	+125	°C	
Load Capacitance (CL)	-	12.5	-	pF	
Frequency/Temp Coefficient	-	-	0.04	ppm/C²	
Turnover Temp	+20	+25	+30	°C	
Equivalent Series Resistance		-	70	Kohm	
Drive Level	-	-	0.5	µW	
Shunt Capacitance	-	1.3	2.0	pF	
Dynamic Capacitance	-	2.1	-	Ff	
Quality Factor		60000			
Capacitance Ratio	-	450	-		
Aging per year	-	±3		ppm/year	
Insulation Resistance	500	-	-	Mohm	@ 100Vdc ± 15V

PART NUMBER GUIDE

Example: CCMJ 32K768A20-12.5-40-70 TLF

CCMJ	32K768	A	20	-12.5	-40	-70	T	LF	XX
1	2	3	4	5	6	7	8	9	10

1) CCMJ: KHz SMD Crystals L4.1*W1.5*H0.90mm

2) 32K768: Frequency Range 32.768KHz

3) A: Oscillation Mode, A: AT Fund.

4) 20: Freq. tolerance, 20: +/-20ppm

5) 12.5: Load Capacitance(CL), 12.5: 12.5pF or Specify CL value

6) 40: Operating Temp. Range, 40: -40°C ~+85°C

7) 70: Equivalent Series Resistance (ESR), 70: 70 Kohm Max.

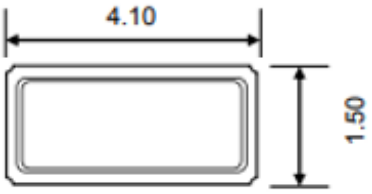
8) T: Package in Tape/Reel, 3000pcs/Reel

9) LF: RoHS Compliant

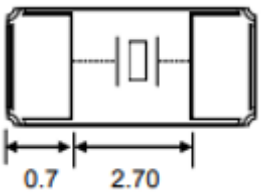
10) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm, Tol.: +/-0.1mm)

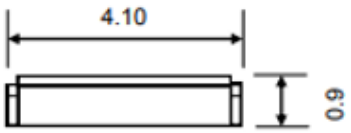
Top View



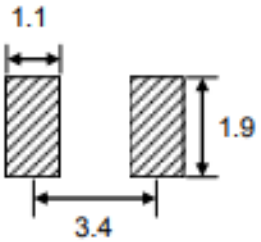
Bottom View



Side View



Solder Pattern



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CCMC**

KHZ SMD CRYSTAL

MAIN FEATURE

• 32.768KHz • Plastic Package • High Precision & Reliability

RFQ
Request For Quotation

APPLICATION

• Notebook computer, TV, STB, LCDM and more

RoHS3 Compliant
RoHS Annex III lead Exemption
(exempt per RoHS EU 2015/863)

L8.0*W3.8*H2.4mm

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	30.00	32.768	200.00	KHz	
Oscillation Mode		AT Fund.			
Frequency Tolerance	-	±20		ppm	@25 °C or Specify
Operating Temperature Range	-40	-	+85	°C	CL: 6.0pF, 7.0pF, 9.0pF or Specify for option
Storage Temperature Range	-55	-	+125	°C	
Load Capacitance (CL)	-	12.5	-	pF	
Frequency/Temp Coefficient	0.028	0.034	0.04	ppm/C²	
Turnover Temp	+20	+25	+30	°C	
Equivalent Series Resistance		-	50	Kohm	
Drive Level	-	-	1.0	µW	
Shunt Capacitance	-	-	2.0	pF	
Dynamic Capacitance	-	1.8	-	Ff	
Quality Factor		60000			
Capacitance Ratio	-	450	-		
Aging per year	-	±3		ppm/year	
Insulation Resistance	500	-	-	Mohm	@ 100Vdc ± 15V

PART NUMBER GUIDE

Example: CCMC 32K7680A20-12.5-40-50 TLH

CCMC	32K768	A	20	-12.5	-40	-50	T	LH	XX
1	2	3	4	5	6	7	8	9	10

1) CCMC: KHz SMD Crystals L8.0*W3.8*H2.4mm

2) 32K768: Frequency Range 32.768KHz

3) A: Oscillation Mode, A: AT Fund.

4) 20: Freq. tolerance, 20: +/-20ppm

5) 12.5: Load Capacitance(CL), 12.5: 12.5pF or Specify CL value

6) 40: Operating Temp. Range, 40: -40°C ~+85°C

7) 50: Equivalent Series Resistance (ESR), 50: 50 Kohm Max.

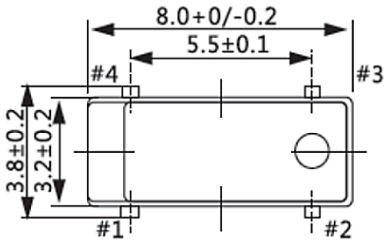
8) T: Package in Tape/Reel, 3000pcs/Reel

9) LH: LH: RoHS Compliant, RoHS Annex III lead Exemption (exempt per RoHS EU 2015/863

10) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm)

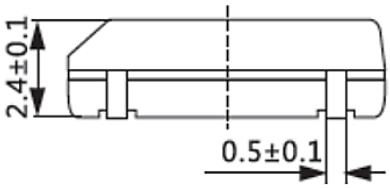
Top View

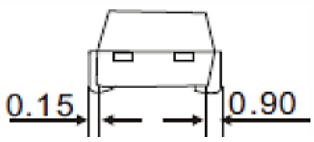


Note:

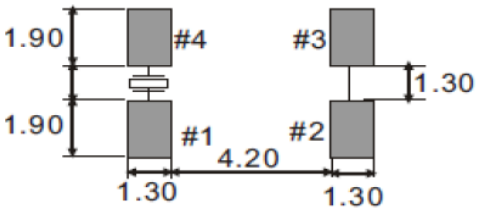
- Do not connect pad 2 and Pad 3 to external devices.
- Metal inside may be exposed on the top or bottom of plastic case
- It isn't Quality problem. This will not affect any quality, reliability and electrical specification when used

Side View





Solder Pattern



Connection
#1 Crystal
#2 Ground
#3 Ground
#4 Crystal

NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CCA**

KHZ THRU- HOLE CRYSTAL

MAIN FEATURE

- 32.768KHz Std. and wide Frequency range

RFQ
Request For Quotation

Ø2.0*H6.0mm

APPLICATION

- Clock/Watch and more

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	30.00	32.768	200.00	KHz	
Oscillation Mode		AT Fund.			
Frequency Tolerance	-	±20		ppm	@25 °C or Specify
Operating Temperature Range	-10	-	+60	°C	CL: 7.0pF, 9.0pF or Specify Wide Operating Temp. range See Part number Guide for option
Storage Temperature Range	-40	-	+85	°C	
Load Capacitance (CL)	-	12.5	-	pF	
Frequency/Temp Coefficient	0.028	0.034	0.040	ppm/C²	
Turnover Temp	+20	+25	+30	°C	
Equivalent Series Resistance		-	35	Kohm	
Drive Level	-	-	1.0	µW	
Shunt Capacitance	0.9	1.8	2.0	pF	
Dynamic Capacitance	-	2.1	-	Ff	
Quality Factor		60000			
Capacitance Ratio	-	450	-		
Aging per year	-	±5		ppm/year	
Insulation Resistance	500	-	-	Mohm	@ 100Vdc ± 15V

PART NUMBER GUIDE

Example: CCA 32K768A20-12.5-10-35 BLF

CCA	32K768	A	20	-12.5	-10	-35	B	LF	XX
1	2	3	4	5	6	7	8	9	10

1) CCA: KHz SMD Crystals Ø2.0*H6.0mm

2) 32K768: Frequency Range 32.768KHz

3) A: Oscillation Mode, A: AT Fund.

4) 20: Freq. tolerance, 20: +/-20ppm

5) 12.5: Load Capacitance(CL), 12.5: 12.5pF or Specify CL value

6) 10: Operating Temp. Range, 10: -10°C ~+60°C

7) 35: Equivalent Series Resistance (ESR), 35: 35 Kohm Max.

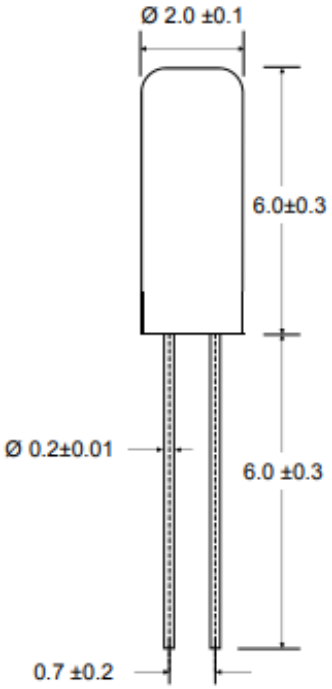
10) B: Package in bulk

10) LF: RoHS Compliant

11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm)

Side View



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CCB**

KHZ THRU- HOLE CRYSTAL

MAIN FEATURE

- 32.768KHz Std. and wide Frequency range

RFQ
Request For Quotation

Ø3.1*H8.3mm

APPLICATION

- Clock/Watch and more

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition
	Min.	Type	Max.		
Frequency Range	30.00	32.768	200.00	KHz	
Oscillation Mode		AT Fund.			
Frequency Tolerance	-	±20		ppm	@25 °C or Specify
Operating Temperature Range	-10	-	+60	°C	CL: 7.0pF, 9.0pF or Specify Wide Operating Temp. range See Part number Guide for option
Storage Temperature Range	-40	-	+85	°C	
Load Capacitance (CL)	-	12.5	-	pF	
Frequency/Temp Coefficient	0.028	0.034	0.040	ppm/C²	
Turnover Temp	+20	+25	+30	°C	
Equivalent Series Resistance		-	35	Kohm	
Drive Level	-	-	1.0	µW	
Shunt Capacitance	0.9	1.8	2.0	pF	
Dynamic Capacitance	-	2.1	-	Ff	
Quality Factor		60000			
Capacitance Ratio	-	450	-		
Aging per year	-	±5		ppm/year	
Insulation Resistance	500	-	-	Mohm	@ 100Vdc ± 15V

PART NUMBER GUIDE

Example: CCB 32K768A20-12.5-10-35 BLF

CCB	32K768	A	20	-12.5	-10	-35	B	LF	XX
1	2	3	4	5	6	7	8	9	10

1) CCB: KHz SMD Crystals Ø3.1*H8.3mm

2) 32K768: Frequency Range 32.768KHz

3) A: Oscillation Mode, A: AT Fund.

4) 20: Freq. tolerance, 20: +/-20ppm

5) 12.5: Load Capacitance(CL), 12.5: 12.5pF or Specify CL value

6) 10: Operating Temp. Range, 10: -10°C ~+60°C

7) 35: Equivalent Series Resistance (ESR), 35: 35 Kohm Max.

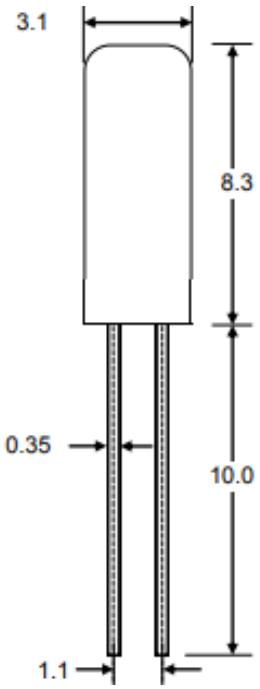
10) B: Package in bulk

10) LF: RoHS Compliant

11) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

DIMENSION (Unit: mm, Tol.: +/-0.20mm)

Side View



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **COM11**

MHZ SMD OSCILLATOR

MAIN FEATURE

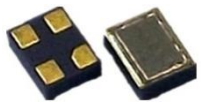
- Wide Frequency range • 1.8V, 2.5V and 3.3Voption
- Industry standard option

RFQ
Request For Quotation

NEW

APPLICATION

- PDA, PND, DSC, Smart phone, WiLAN, Bluetooth and more



L1.6*W1.2*H0.70mm

STANDARD SPECIFICATION

Parameter		Value			Unit	Condition
		Min.	Type	Max.		
Supply Voltage		-	3.3	-	V	or Specify 1.8V/2.5V
Frequency Range		1		80	MHz	or Specify
Overall Freq. Tolerance		-	±50		ppm	or Specify
Operating Temp. Range		0	-	70	°C	see p/n guide or Specify
Output	VOH	90%	-	-	V	@90% x VDD
	VOL	-	-	10%	V	@10% x VDD
	Load	-	15	-	pF	see p/n guide or Specify
Enable/Disable Function		-	Tri-State	-		@ Control via pin 1 or see p/n guide
Symmetry		40	-	60		see p/n guide or Specify
Startup Time		-	-	10	ms	
Supply Current		-	-	2	mA	Subject to different frequency range
Rise/ Fall time		-	-	10	ns	
Storage Temperature Range		-55	-	125	°C	
Aging per year		-	±5		ppm	

PART NUMBER GUIDE

Example: COM1131BDH03TLF-24M000

COM11	3	1	B	D	H	03	T	LF	XX	-24M000
1	2	3	4	5	6	7	8	9	10	11

1) CM11: MHz SMD Oscillator, 4 pads, L1.6*W1.2*H0.70mm

2) 3: Supply Voltage, 3: 3.3V; 2: 2.5V; 1: 1.8V

3) 1: Enable/Disable Function, 1: Tri-state Via Pin 1; 0: N/A

4) B: Overall Frequency tolerance, A-+/-25pm; B: +/-50ppm; C: +/-100ppm; J-+/-20ppm or Specify

5) D: Operating Temp. Range, D-0~70 °C; E: -10 ~+60°C: F: -20 ~+70 °C; G: -40 ~+85 °C or Specify

6) H: Symmetry H: 40/60; I: 45/55

7) 03: Output Load: 00: 1-10TTL//15pF; 01:HCMOS//15pF; 03: HCMOS//30pF; 05: HCMOS//50pF or Specify

8) T: Packed in Tape/Reel, 3000pcs/Reel

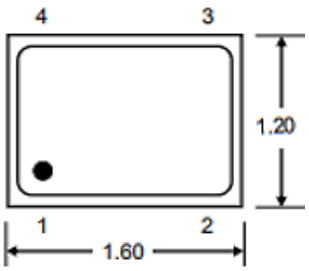
9) LF: RoHS Complaint

10) XX: Internal Control Code- 2 letter or digits ; Blank: N/A

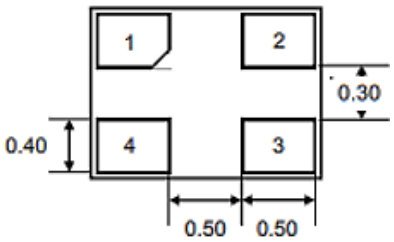
11) 24M000: Frequency Range 24.000MHz or specify

DIMENSION (Unit: mm)

Top View



Bottom View



Pin Function

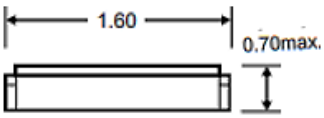
#1 Enable (Tri-State)/ Disable

#2 Ground

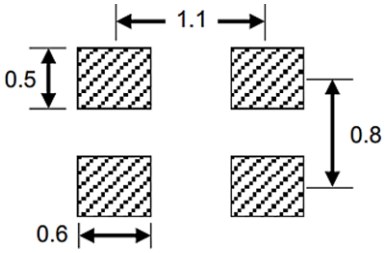
#3 Output

#4 VDD

Side View



Solder Pattern for reference



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **COM21**

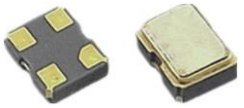
MHZ SMD OSCILLATOR

MAIN FEATURE

- Wide Frequency range • 1.8V, 2.5V and 3.3Voption
- Industry standard option

RFQ
Request For Quotation

NEW



L2.0*W1.6*H0.90mm

APPLICATION

- PDA, PND, DSC, Smart phone, WiLAN, Bluetooth and more

STANDARD SPECIFICATION

Parameter		Value			Unit	Condition
		Min.	Type	Max.		
Supply Voltage		-	3.3	-	V	or Specify 1.8V/2.5V
Frequency Range		1.00		80.00	MHz	or Specify
Overall Freq. Tolerance		-	±50		ppm	or Specify
Operating Temp. Range		0	-	70	°C	see p/n guide or Specify
Output	VOH	90%	-	-	V	@90% x VDD
	VOL	-	-	10%	V	@10% x VDD
	Load	-	15	-	pF	see p/n guide or Specify
Enable/Disable Function		-	Tri-State	-		@ Control via pin 1 or see p/n guide
Symmetry		40	-	60		see p/n guide or Specify
Startup Time		-	-	10	ms	
Supply Current		-	-	5	mA	Subject to different frequency range
Rise/ Fall time		-	-	10	ns	
Storage Temperature Range		-55	-	125	°C	
Aging per year		-	±5		ppm	

PART NUMBER GUIDE

Example: COM2131BDH03TLF-24M000

COM21	3	1	B	D	H	03	T	LF	XX	-24M000
1	2	3	4	5	6	7	8	9	10	11

1) CM21: MHz SMD Oscillator, 4 pads, L2.0*W1.6*H0.90mm

2) 3: Supply Voltage, 3: 3.3V; 2: 2.5V; 1: 1.8V

3) 1: Enable/Disable Function, 1: Tri-state Via Pin 1; 0: N/A

4) B: Overall Frequency tolerance, A-+/-25pm; B: +/-50ppm; C: +/-100ppm; J-+/-20ppm or Specify

5) D: Operating Temp. Range, D-0~70 °C; E: -10 ~+60°C: F: -20 ~+70 °C; G: -40 ~+85 °C or Specify

6) H: Symmetry H: 40/60; I: 45/55

7) 03: Output Load: 00: 1-10TTL//15pF; 01:HCMOS//15pF; 03: HCMOS//30pF; 05: HCMOS//50pF or Specify

8) T: Packed in Tape/Reel, 3000pcs/Reel

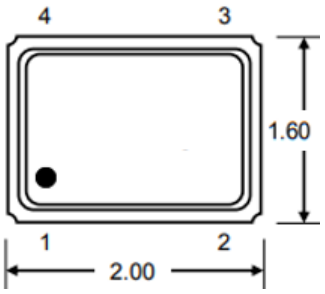
9) LF: RoHS Complaint

10) XX: Internal Control Code- 2 letter or digits ; Blank: N/A

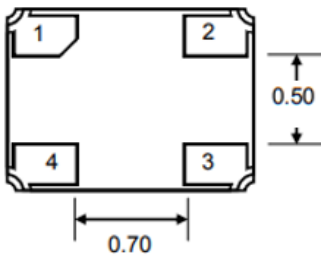
11) 24M000: Frequency Range 24.000MHz or specify

DIMENSION (Unit: mm)

Top View



Bottom View



Pin Function

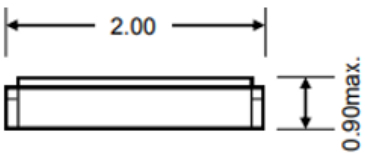
#1 Enable (Tri-State)/ Disable

#2 Ground

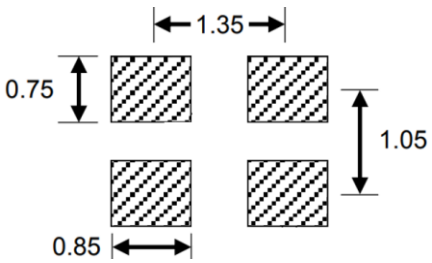
#3 Output

#4 VDD

Side View



Solder Pattern for reference



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **COM22**

MHZ SMD OSCILLATOR

MAIN FEATURE

- Wide Frequency range • 1.8V, 2.5V and 3.3Voption
- Industry standard option

RFQ
Request For Quotation

APPLICATION

- PDA, PND, DSC, Smart phone, WiLAN, Bluetooth and more

L2.5*W2.0*H1.0mm

STANDARD SPECIFICATION

Parameter		Value			Unit	Condition
		Min.	Type	Max.		
Supply Voltage		-	3.3	-	V	see p/n guide or Specify
Frequency Range		1.00		150.00	MHz	see p/n guide or Specify
Overall Freq. Tolerance		-	±50		ppm	see p/n guide or Specify
Operating Temp. Range		0	-	70	°C	see p/n guide or Specify
Output	VOH	90%	-	-	V	@90% x VDD
	VOL	-	-	10%	V	@10% x VDD
	Load	-	15	-	pF	see p/n guide or Specify
Enable/Disable Function		-	Tri-State	-		@ Control via pin 1 or see p/n guide
Symmetry		40	-	60		see p/n guide or Specify
Startup Time		-	-	10	ms	
Supply Current		-	-	15	mA	Subject to different frequency range
Rise/ Fall time		-	-	10	ns	
Storage Temperature Range		-55	-	125	°C	
Aging per year		-	±5		ppm	

PART NUMBER GUIDE

Example: COM2231BDH03TLF-24M000

COM22	3	1	B	D	H	03	T	LF	XX	-24M000
1	2	3	4	5	6	7	8	9	10	11

1) CM22: MHz SMD Oscillator, 4 pads, L2.5*W2.0*H1.0mm

2) 3: Supply Voltage, 3: 3.3V; 2: 2.5V; 1: 1.8V

3) 1: Enable/Disable Function, 1: Tri-state Via Pin 1; 0: N/A

4) B: Overall Frequency tolerance, A-+/-25pm; B: +/-50ppm; C: +/-100ppm; J-+/-20ppm or Specify

5) D: Operating Temp. Range, D-0~70 °C; E: -10 ~+60°C: F: -20 ~+70 °C; G: -40 ~+85 °C or Specify

6) H: Symmetry H: 40/60; I: 45/55

7) 03: Output Load: 00: 1-10TTL//15pF; 01:HCMOS//15pF; 03: HCMOS//30pF; 05: HCMOS//50pF or Specify

8) T: Packed in Tape/Reel, 3000pcs/Reel

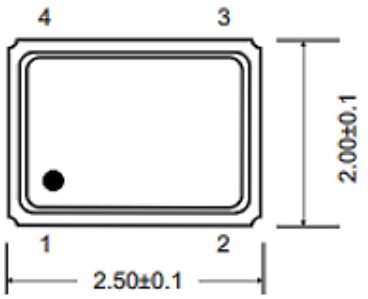
9) LF: RoHS Complaint

10) XX: Internal Control Code- 2 letter or digits ; Blank: N/A

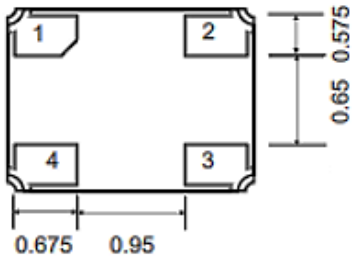
11) 24M000: Frequency Range 24.000MHz or specify

DIMENSION (Unit: mm)

Top View



Bottom View



Pin Function

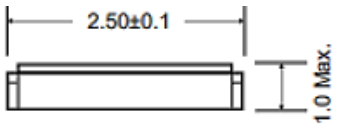
#1 Enable (Tri-State)/ Disable

#2 Ground

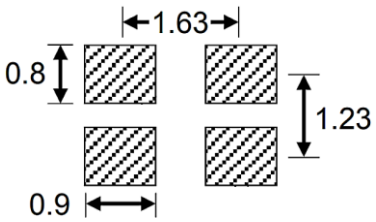
#3 Output

#4 VDD

Side View



Solder Pattern for reference



NextGen Components,Inc.

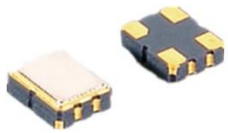
ORIGINAL PART SERIES NO.: **COM32**

MHZ SMD OSCILLATOR

MAIN FEATURE

- Wide Frequency range • 1.8V, 2.5V and 3.3Voption
- Industry standard option

RFQ
Request For Quotation



APPLICATION

- PDA, PND, DSC, Smart phone, WiLAN, Bluetooth and more

L3.2*W2.5*H1.2mm

STANDARD SPECIFICATION

Parameter		Value			Unit	Condition
		Min.	Type	Max.		
Supply Voltage		-	3.3	-	V	see p/n guide or Specify
Frequency Range		1.00		150.00	MHz	see p/n guide or Specify
Overall Freq. Tolerance		-	±50		ppm	see p/n guide or Specify
Operating Temp. Range		0	-	70	°C	see p/n guide or Specify
Output	VOH	90%	-	-	V	@90% x VDD
	VOL	-	-	10%	V	@10% x VDD
	Load	-	15	-	pF	see p/n guide or Specify
Enable/Disable Function:		-	Tri-State	-		@ Control via pin 1 or see p/n guide
Symmetry		40	-	60		see p/n guide or Specify
Startup Time		-	-	10	ms	
Supply Current		-	-	15	mA	Subject to different frequency range
Rise/ Fall time		-	-	10	ns	
Storage Temperature Range		-55	-	125	°C	
Aging per year		-	±5		ppm	

PART NUMBER GUIDE

Example: COM3231BDH03TLF-24M000

COM32	3	1	B	D	H	03	T	LF	XX	-24M000
1	2	3	4	5	6	7	8	9	10	11

1) CM32: MHz SMD Oscillator, 4 pads, L3.2*W2.5*H1.2mm

2) 3: Supply Voltage, 3: 3.3V; 2: 2.5V; 1: 1.8V

3) 1: Enable/Disable Function, 1: Tri-state Via Pin 1; 0: N/A

4) B: Overall Frequency tolerance, A-+/-25pm; B: +/-50ppm; C: +/-100ppm; J-+/-20ppm or Specify

5) D: Operating Temp. Range, D-0~70 °C; E: -10 ~+60°C: F: -20 ~+70 °C; G: -40 ~+85 °C or Specify

6) H: Symmetry H: 40/60; I: 45/55

7) 03: Output Load: 00: 1-10TTL//15pF; 01:HCMOS//15pF; 03: HCMOS//30pF; 05: HCMOS//50pF or Specify

8) T: Packed in Tape/Reel, 3000pcs/Reel

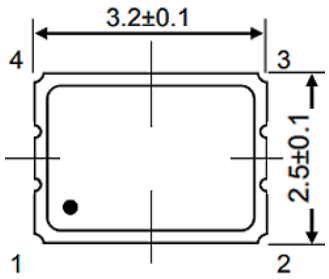
9) LF: RoHS Complaint

10) XX: Internal Control Code- 2 letter or digits ; Blank: N/A

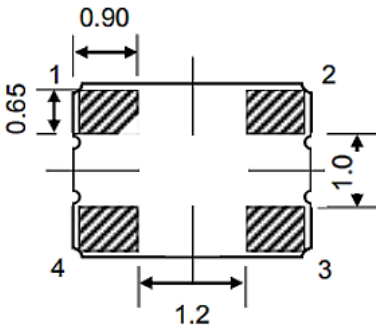
11) 24M000: Frequency Range 24.000MHz or specify

DIMENSION (Unit: mm)

Top View



Bottom View



Pin Function

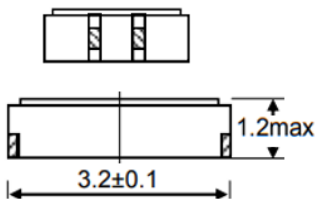
#1 Enable (Tri-State)/ Disable

#2 Ground

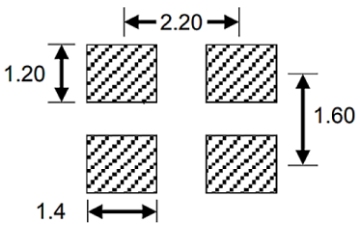
#3 Output

#4 VDD

Side View



Solder Pattern for reference



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **COM53**

MHZ SMD OSCILLATOR

MAIN FEATURE

• Wide Frequency range • 1.8V, 2.5V, 3.3V, 5.0V option

RFQ
Request For Quotation

L5.0*W3.2*H1.3mm

APPLICATION

• PDA, PND, DSC, Smart phone, WiLAN, Bluetooth and more

STANDARD SPECIFICATION

Parameter		Value			Unit	Condition
		Min.	Type	Max.		
Supply Voltage		-	3.3	-	V	see p/n guide or Specify
Frequency Range		1.00		125.00	MHz	see p/n guide or Specify
Overall Freq. Tolerance		-	±50		ppm	see p/n guide or Specify
Operating Temp. Range		0	-	70	°C	see p/n guide or Specify
Output	VOH	90%	-	-	V	@90% x VDD
	VOL	-	-	10%	V	@10% x VDD
	Load	-	15	-	pF	see p/n guide or Specify
Enable/Disable Function:		-	Tri-State	-		@ Control via pin 1 or see p/n guide
Symmetry		40	-	60		see p/n guide or Specify
Startup Time		-	-	10	ms	
Supply Current		-	-	15	mA	Subject to different frequency range
Rise/ Fall time		-	-	10	ns	
Storage Temperature Range		-55	-	125	°C	
Aging per year		-	±5		ppm	

PART NUMBER GUIDE

Example: COM53 31BGH03 TLF-24M000

COM53	3	1	B	G	H	03	T	LF	XX	- 24M000
1	2	3	4	5	6	7	8	9	10	11

1) COM53: KHz SMD Oscillator, 4 pads, L5.0*W3.2*H1.3mm

2) 3: Supply Voltage, 5: 5.0V; 3: 3.3V; 2: 2.5V; 1: 1.8V

3) 1: Enable/Disable Function, 1: Tri-state Via Pin 1; 0: N/A

4) B: Overall Frequency tolerance, A-+/-25pm; B: +/-50ppm; C: +/-100ppm; J-+/-20ppm or Specify

5) G: Operating Temp. Range, D-0~70 °C; E: -10 ~+60°C: F: -20 ~+70 °C; G: -40 ~+85 °C or Specify

6) H: Symmetry H: 40/60; I: 45/55

7) 03: Output Load: 00: 1-10TTL//15pF; 01:HCMOS//15pF; 03: HCMOS//30pF; 05: HCMOS//50pF or Specify

8) T: Packed in Tape/Reel, 1000pcs/Reel

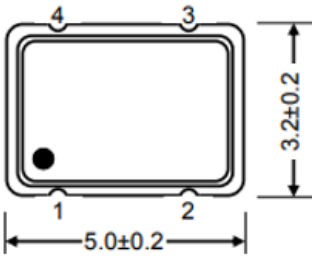
9) LF: RoHS Compliant

10) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

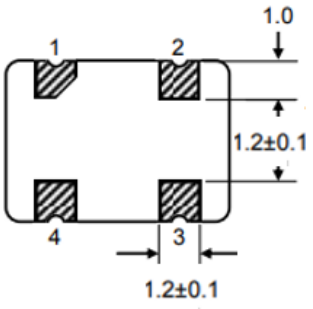
11) 24M000: Frequency Range 24.000MHz or specify

DIMENSION (Unit: mm)

Top View



Bottom View



Pin Function

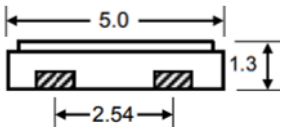
#1 Enable(Tri-State)/Disable

#2 Ground

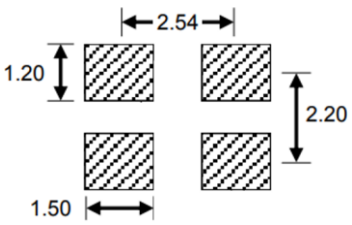
#3 Output

#4 VDD

Side View



Solder Pattern for reference



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **COM75**

MHZ SMD OSCILLATOR

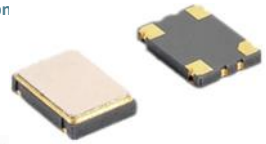
MAIN FEATURE

• Wide Frequency range • 1.8V, 2.5V, 3.3V, 5.0V option

APPLICATION

• PDA, PND, DSC, Smart phone, WiLAN, Bluetooth and more

RFQ
Request For Quotation



L7.0*W5.0*H1.5mm

STANDARD SPECIFICATION

Parameter		Value			Unit	Condition
		Min.	Type	Max.		
Supply Voltage		-	3.3	-	V	see p/n guide or Specify
Frequency Range		1.54		125.00	MHz	see p/n guide or Specify
Overall Freq. Tolerance		-	±50		ppm	see p/n guide or Specify
Operating Temp. Range		0	-	70	°C	see p/n guide or Specify
Output	VOH	90%	-	-	V	@90% x VDD
	VOL	-	-	10%	V	@10% x VDD
	Load	-	15	-	pF	see p/n guide or Specify
Enable/Disable Function:		-	Tri-State	-		@ Control via pin 1 or see p/n guide
Symmetry		40	-	60		see p/n guide or Specify
Startup Time		-	-	10	ms	
Supply Current		-	-	80	mA	Subject to different frequency range
Rise/ Fall time		-	-	10	ns	
Storage Temperature Range		-55	-	+125	°C	
Aging per year		-	±5		ppm	

PART NUMBER GUIDE

Example: COM75 31BGH03 TLF-24M000

COM75	3	1	B	G	H	03	T	LF	XX	-24M000
1	2	3	4	5	6	7	8	9	10	11

1) COM75: MHz SMD Oscillator, 4 pads L7.0*W5.0*H1.5mm

2) 3: Supply Voltage, 5: 5.0V; 3: 3.3V; 2: 2.5V; 1: 1.8V

3) 1: Enable/Disable Function, 1: Tri-state Via Pin 1; 0: N/A

4) B: Overall Frequency tolerance, A-+/-25pm; B: +/-50ppm; C: +/-100ppm; J-+/-20ppm or Specify

5) G: Operating Temp. Range, D-0~70 °C; E: -10 ~+60°C: F: -20 ~+70 °C; G: -40 ~+85 °C or Specify

6) H: Symmetry H: 40/60; I: 45/55

7) 03: Output Load: 00: 1-10TTL//15pF; 01:HCMOS//15pF; 03: HCMOS//30pF; 05: HCMOS//50pF or Specify

8) T: Packed in Tape/Reel, 1000pcs/Reel

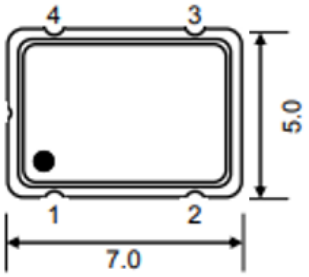
9) LF: RoHS Compliant

10) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

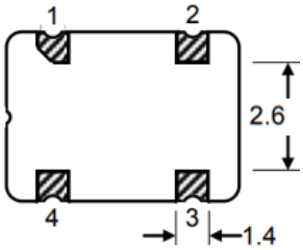
11) 24M000: Frequency Range 24.000MHz or specify

DIMENSION (Unit: mm)

Top View



Bottom View



Pin Function

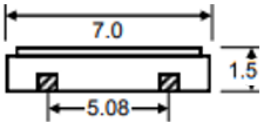
#1 Enable(Tri-State)/Disable

#2 Ground

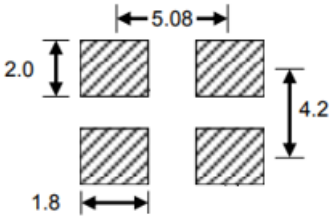
#3 Output

#4 VDD

Side View



Solder Pattern for reference



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CO14**

MHZ THRU- HOLE OSCILLATOR

MAIN FEATURE

• Wide Frequency range • 1.8V, 2.5V, 3.3V, 5.0V option

RFQ
Request For Quotation

APPLICATION

• IT Applications and more • Telecommunications

L20.8*W13.2*H5.08m

STANDARD SPECIFICATION

Parameter		Value			Unit	Condition
		Min.	Type	Max.		
Supply Voltage		-	5.0	-	V	see p/n guide or Specify
Frequency Range		0.5		155.00	MHz	see p/n guide or Specify
Overall Freq. Tolerance		-	±50		ppm	see p/n guide or Specify
Operating Temp. Range		-40	-	+85	°C	see p/n guide or Specify
Output	VOH	90%	-	-	V	@90% x VDD
	VOL	-	-	10%	V	@10% x VDD
	Load	-	15	-	pF	see p/n guide or Specify
Enable/Disable Function:		-	Tri-State	-		@ Control via pin 1 or see p/n guide
Symmetry		45	-	55		see p/n guide or Specify
Startup Time		-	-	10	ms	
Supply Current		-	-	35	mA	Subject to different frequency range
Rise/ Fall time		-	-	10	ns	
Storage Temperature Range		-55	-	+125	°C	
Aging per year		-	±5		ppm	

PART NUMBER GUIDE

Example: CO1451BGH05 BLF-48M000

CO14	5	1	B	G	H	05	B	LF	XX	- 48M000
1	2	3	4	5	6	7	8	9	10	11

1) CO14: MHz Thru Hole Oscillator, Full size, L20.8*W13.2*H5.08mm

2) 5: Supply Voltage, 5: 5.0V; 3: 3.3V; 2: 2.5V; 1: 1.8V

3) 1: Enable/Disable Function, 1: Tri-state Via Pin 1; 0: N/A

4) B: Overall Frequency tolerance, A-+/-25pm; B: +/-50ppm; C: +/-100ppm; J-+/-20ppm or Specify

5) G: Operating Temp. Range, D-0~70 °C; E: -10 ~+60°C: F: -20 ~+70 °C; G: -40 ~+85 °C or Specify

6) H: Symmetry H: 40/60; I: 45/55

7) 05: Output Load: 00: 1-10TTL//15pF; 01:HCMOS//15pF; 03: HCMOS//30pF; 05: HCMOS//50pF or Specify

8) B: Package in Bulk, 25pcs/Plastic Tube

9) LF: RoHS Compliant

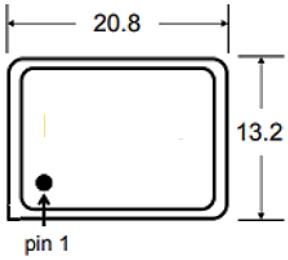
10) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

11) 48M000: Frequency Range 48.000MHz or specify

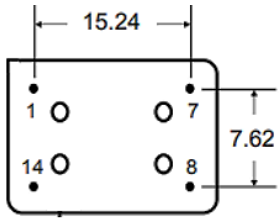
MHZ THRU- HOLE OSCILLATOR

DIMENSION (Unit: mm)

Top View



Bottom View



Pin Function

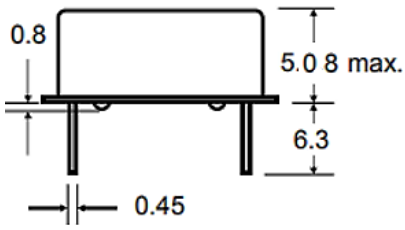
#1 Enable(Tri-State) /Disable

#7 Ground

#8 Output

#14 VDC

Side View



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **CO8**

MHZ THRU- HOLE OSCILLATOR

MAIN FEATURE

• Wide Frequency range • 1.8V, 2.5V, 3.3V, 5.0V option

RFQ
Request For Quotation

APPLICATION

• IT Applications and more • Telecommunications

L13.2*W13.2*H5.08m

STANDARD SPECIFICATION

Parameter		Value			Unit	Condition
		Min.	Type	Max.		
Supply Voltage		-	5.0	-	V	see p/n guide or Specify
Frequency Range		0.5		155.00	MHz	see p/n guide or Specify
Overall Freq. Tolerance		-	±50		ppm	see p/n guide or Specify
Operating Temp. Range		-40	-	+85	°C	see p/n guide or Specify
Output	VOH	90%	-	-	V	@90% x VDD
	VOL	-	-	10%	V	@10% x VDD
	Load	-	15	-	pF	see p/n guide or Specify
Enable/Disable Function:		-	Tri-State	-		@ Control via pin 1 or see p/n guide
Symmetry		45	-	55		see p/n guide or Specify
Startup Time		-	-	10	ms	
Supply Current		-	-	35	mA	Subject to different frequency range
Rise/ Fall time		-	-	10	ns	
Storage Temperature Range		-55	-	+125	°C	
Aging per year		-	±5		ppm	

PART NUMBER GUIDE

Example: CO851BGH05 BLF-48M000

CO8	5	1	B	G	H	05	B	LF	XX	- 48M000
1	2	3	4	5	6	7	8	9	10	11

1) CO8: MHz Thru Hole Oscillator, Full size, L13.2*W13.2*H5.08mm

2) 5: Supply Voltage, 5: 5.0V; 3: 3.3V; 2: 2.5V; 1: 1.8V

3) 1: Enable/Disable Function, 1: Tri-state Via Pin 1; 0: N/A

4) B: Overall Frequency tolerance, A-+/-25pm; B: +/-50ppm; C: +/-100ppm; J-+/-20ppm or Specify

5) G: Operating Temp. Range, D-0~70 °C; E: -10 ~+60°C: F: -20 ~+70 °C; G: -40 ~+85 °C or Specify

6) H: Symmetry H: 40/60; I: 45/55

7) 05: Output Load: 00: 1-10TTL//15pF; 01:HCMOS//15pF; 03: HCMOS//30pF; 05: HCMOS//50pF or Specify

8) B: Package in Bulk, 40pcs/Plastic Tube

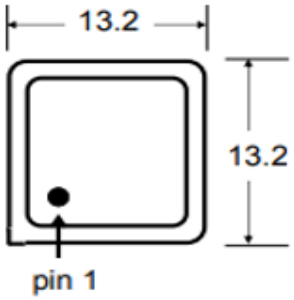
9) LF: RoHS Compliant

10) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

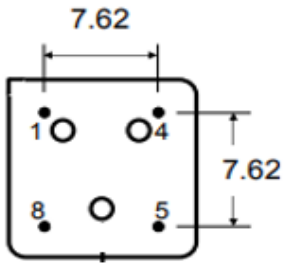
11) 48M000: Frequency Range 48.000MHz or specify

DIMENSION (Unit: mm)

Top View

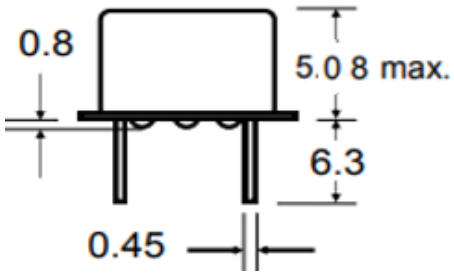


Bottom View



Pin	Function
#1	Enable(Tri-State)/Disable
#4	Ground
#5	Output
#8	VDC

Side View



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **COK21**

KHZ SMD OSCILLATOR

MAIN FEATURE

• 32.768KHz standard Frequency range • 1.8V, 2.5V, 3.3V, 5.0V option

RFQ
Request For Quotation

L2.0*W1.6*H0.80mm

APPLICATION

• PDA, PND, DSC, Smart phone, WiLAN, Bluetooth and more

STANDARD SPECIFICATION

Parameter		Value			Unit	Condition
		Min.	Type	Max.		
Supply Voltage		-	3.3	-	V	see p/n guide or Specify
Frequency Range		-	32.768	-	KHz	
Overall Freq. Tolerance		-	±50		ppm	see p/n guide or Specify
Operating Temp. Range		-0	-	+70	°C	see p/n guide or Specify
Output (HCMOS)	VOH	90%	-	-	V	@90% x VDD
	VOL	-	-	10%	V	@10% x VDD
	Load	-	15	-	pF	see p/n guide or Specify
Enable/Disable Function:		-	Tri-State	-		@ Control via pin 1 or see p/n guide
Symmetry		40	-	60		see p/n guide or Specify
Startup Time		-	-	10	ms	
Supply Current		-	-	240	µA	
Rise/ Fall time		-	-	200	ns	
Storage Temperature Range		-55	-	+125	°C	
Aging per year		-	±5		ppm	

PART NUMBER GUIDE

Example: COK21 31BGH03 TLF-32K768

COK21	3	1	B	G	H	03	T	LF	XX	-32K768
1	2	3	4	5	6	7	8	9	10	11

1) COK21: KHz SMD Oscillator, 4 pads, L2.0*W1.6*H0.80mm

2) 3: Supply Voltage, 5: 5.0V; 3: 3.3V; 2: 2.5V; 1: 1.8V

3) 1: Enable/Disable Function, 1: Tri-state Via Pin 1; 0: N/A

4) B: Overall Frequency tolerance, A-+/-25pm; B: +/-50ppm; C: +/-100ppm; J-+/-20ppm or Specify

5) G: Operating Temp. Range, D-0~70 °C; E: -10 ~+60°C: F: -20 ~+70 °C; G: -40 ~+85 °C or Specify

6) H: Symmetry H: 40/60; I: 45/55

7) 03: Output Load: 00: 1-10TTL//15pF; 01:HCMOS//15pF; 03: HCMOS//30pF; 05: HCMOS//50pF or Specify

8) T: Packed in Tape/Reel, 3000pcs/Reel

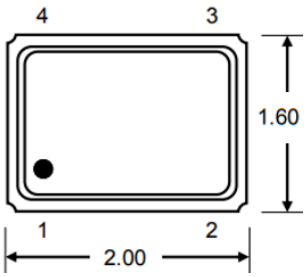
9) LF: RoHS Compliant

10) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

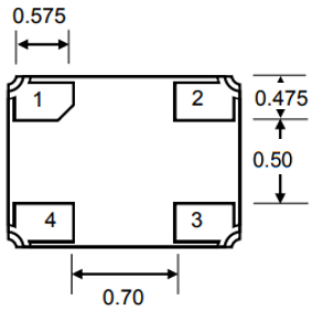
11) 32K768: Frequency Range 32.768KHz or specify

DIMENSION (Unit: mm)

Top View



Bottom View



Pin Function

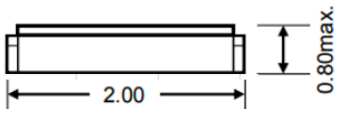
#1 Enable(Tri-State)/Disable

#2 Ground

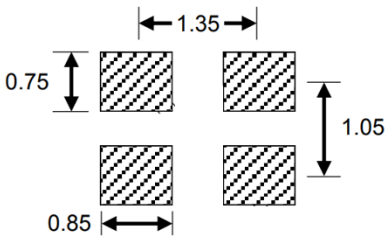
#3 Output

#4 VDD

Side View



Solder Pattern for reference



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **COK22**

KHZ SMD OSCILLATOR

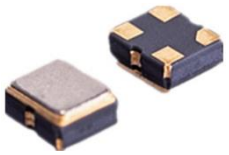
MAIN FEATURE

• 32.768KHz standard Frequency range • 1.8V, 2.5V, 3.3V, 5.0V option

RFQ
Request For Quotation

APPLICATION

• PDA, PND, DSC, Smart phone, WiLAN, Bluetooth and more



L2.5*W2.0*H1.0mm

STANDARD SPECIFICATION

Parameter		Value			Unit	Condition
		Min.	Type	Max.		
Supply Voltage		-	3.3	-	V	see p/n guide or Specify
Frequency Range		-	32.768	-	KHz	
Overall Freq. Tolerance		-	±50		ppm	see p/n guide or Specify
Operating Temp. Range		-0	-	+70	°C	see p/n guide or Specify
Output (HCMOS)	VOH	90%	-	-	V	@90% x VDD
	VOL	-	-	10%	V	@10% x VDD
	Load	-	15	-	pF	see p/n guide or Specify
Enable/Disable Function:		-	Tri-State	-		@ Control via pin 1 or see p/n guide
Symmetry		40	-	60		see p/n guide or Specify
Startup Time		-	-	10	ms	
Supply Current		-	-	240	µA	
Rise/ Fall time		-	-	200	ns	
Storage Temperature Range		-55	-	+125	°C	
Aging per year		-	±5		ppm	

PART NUMBER GUIDE

Example: COK22 31BGH03 TLF-32K768

COK22	3	1	B	G	H	03	T	LF	XX	-32K768
1	2	3	4	5	6	7	8	9	10	11

1) COK22: KHz SMD Oscillator, 4 pads, L2.5*W2.0*H1.0mm

2) 3: Supply Voltage, 5: 5.0V; 3: 3.3V; 2: 2.5V; 1: 1.8V

3) 1: Enable/Disable Function, 1: Tri-state Via Pin 1; 0: N/A

4) B: Overall Frequency tolerance, A-+/-25pm; B: +/-50ppm; C: +/-100ppm; J-+/-20ppm or Specify

5) G: Operating Temp. Range, D-0~70 °C; E: -10 ~+60°C: F: -20 ~+70 °C; G: -40 ~+85 °C or Specify

6) H: Symmetry H: 40/60; I: 45/55

7) 03: Output Load: 00: 1-10TTL//15pF; 01:HCMOS//15pF; 03: HCMOS//30pF; 05: HCMOS//50pF or Specify

8) T: Packed in Tape/Reel, 3000pcs/Reel

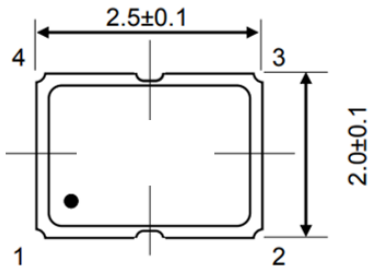
9) LF: RoHS Compliant

10) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

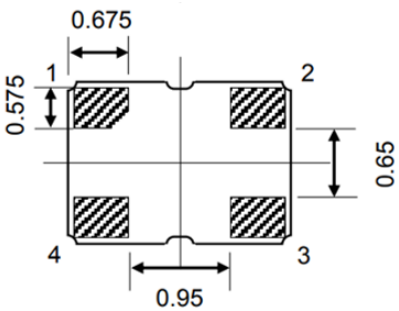
11) 32K768: Frequency Range 32.768KHz or specify

DIMENSION (Unit: mm)

Top View



Bottom View



Pin Function

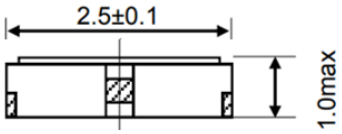
#1 Enable(Tri-State)/Disable

#2 Ground

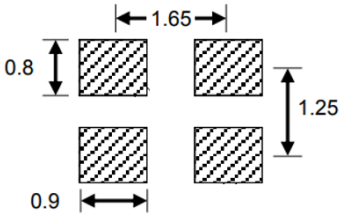
#3 Output

#4 VDD

Side View



Solder Pattern for reference



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **COK32**

KHZ SMD OSCILLATOR

MAIN FEATURE

• 32.768KHz standard Frequency range • 1.8V, 2.5V, 3.3V, 5.0V option

RFQ
Request For Quotation

APPLICATION

• PDA, PND, DSC, Smart phone, WiLAN, Bluetooth and more

L3.2*W2.5*H1.0mm

STANDARD SPECIFICATION

Parameter		Value			Unit	Condition
		Min.	Type	Max.		
Supply Voltage		-	3.3	-	V	see p/n guide or Specify
Frequency Range		-	32.768	-	KHz	
Overall Freq. Tolerance		-	±50		ppm	see p/n guide or Specify
Operating Temp. Range		-0	-	+70	°C	see p/n guide or Specify
Output (HCMOS)	VOH	90%	-	-	V	@90% x VDD
	VOL	-	-	10%	V	@10% x VDD
	Load	-	15	-	pF	see p/n guide or Specify
Enable/Disable Function:		-	Tri-State	-		@ Control via pin 1 or see p/n guide
Symmetry		40	-	60		see p/n guide or Specify
Startup Time		-	-	10	ms	
Supply Current		-	-	240	µA	
Rise/ Fall time		-	-	200	ns	
Storage Temperature Range		-55	-	+125	°C	
Aging per year		-	±5		ppm	

PART NUMBER GUIDE

Example: COK32 31BGH03 TLF-32K768

COK32	3	1	B	D	H	03	T	LF	XX	-32K768
1	2	3	4	5	6	7	8	9	10	11

1) COK32: KHz SMD Oscillator, 4 pads, L3.2*W2.5*H1.0mm

2) 3: Supply Voltage, 5: 5.0V; 3: 3.3V; 2: 2.5V; 1: 1.8V

3) 1: Enable/Disable Function, 1: Tri-state Via Pin 1; 0: N/A

4) B: Overall Frequency tolerance, A-+/-25pm; B: +/-50ppm; C: +/-100ppm; J-+/-20ppm or Specify

5) G: Operating Temp. Range, D-0~70 °C; E: -10 ~+60°C: F: -20 ~+70 °C; G: -40 ~+85 °C or Specify

6) H: Symmetry H: 40/60; I: 45/55

7) 03: Output Load: 00: 1-10TTL//15pF; 01:HCMOS//15pF; 03: HCMOS//30pF; 05: HCMOS//50pF or Specify

8) T: Packed in Tape/Reel, 3000pcs/Reel

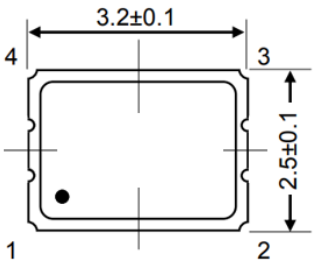
9) LF: RoHS Compliant

10) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

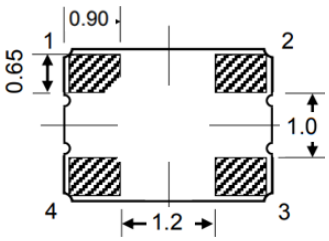
11) 32K768: Frequency Range 32.768KHz or specify

DIMENSION (Unit: mm)

Top View



Bottom View



Pin Function

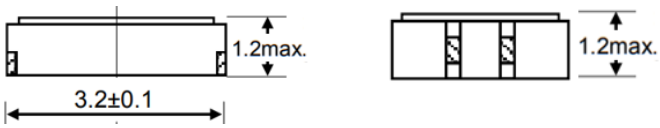
#1 Enable(Tri-State)/Disable

#2 Ground

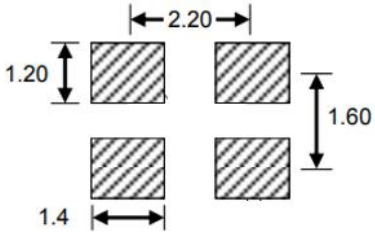
#3 Output

#4 VDD

Side View



Solder Pattern for reference



NextGen Components,Inc.

ORIGINAL PART SERIES NO.: **COK53**

KHZ SMD OSCILLATOR

MAIN FEATURE

• 32.768KHz standard Frequency range • 1.8V, 2.5V, 3.3V, 5.0V option

RFQ
Request For Quotation

L5.0*W3.2*H1.2mm

APPLICATION

• PDA, PND, DSC, Smart phone, WiLAN, Bluetooth and more

STANDARD SPECIFICATION

Parameter		Value			Unit	Condition
		Min.	Type	Max.		
Supply Voltage		-	3.3	-	V	see p/n guide or Specify
Frequency Range		25.00	32.768	100.00	KHz	see p/n guide or Specify
Overall Freq. Tolerance		-	±50		ppm	see p/n guide or Specify
Operating Temp. Range		0	-	+70	°C	see p/n guide or Specify
Output (HCMOS)	VOH	90%	-	-	V	@90% x VDD
	VOL	-	-	10%	V	@10% x VDD
	Load	-	15	-	pF	see p/n guide or Specify
Enable/Disable Function:		-	Tri-State	-		@ Control via pin 1 or see p/n guide
Symmetry		40	-	60		see p/n guide or Specify
Startup Time		-	-	10	ms	
Supply Current		-	-	15	mA	
Rise/ Fall time		-	-	10	ns	
Storage Temperature Range		-55	-	+125	°C	
Aging per year		-	±5		ppm	

PART NUMBER GUIDE

Example: COK53 31BGH03 TLF-32K768

COK53	3	1	B	G	H	03	T	LF	XX	-32K768
1	2	3	4	5	6	7	8	9	10	11

1) COK53: KHz SMD Oscillator, 4 pads, L5.0*W3.2*H1.2mm

2) 3: Supply Voltage, 5: 5.0V; 3: 3.3V; 2: 2.5V; 1: 1.8V

3) 1: Enable/Disable Function, 1: Tri-state Via Pin 1; 0: N/A

4) B: Overall Frequency tolerance, A-+/-25pm; B: +/-50ppm; C: +/-100ppm; J-+/-20ppm or Specify

5) G: Operating Temp. Range, D-0~70 °C; E: -10 ~+60°C: F: -20 ~+70 °C; G: -40 ~+85 °C or Specify

6) H: Symmetry H: 40/60; I: 45/55

7) 03: Output Load: 00: 1-10TTL//15pF; 01:HCMOS//15pF; 03: HCMOS//30pF; 05: HCMOS//50pF or Specify

8) T: Packed in Tape/Reel, 1000pcs/Reel

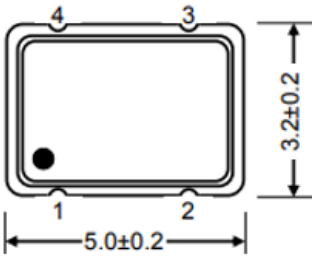
9) LF: RoHS Compliant

10) XX: Intenal Control Code, 2 letter or digits; Blank: N/A

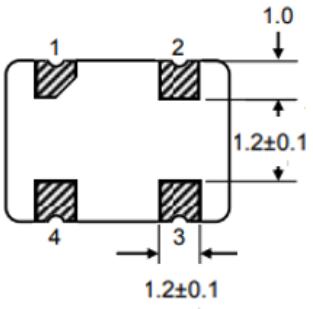
11) 32K768: Frequency Range 32.768KHz or specify

DIMENSION (Unit: mm)

Top View



Bottom View



Pin Function

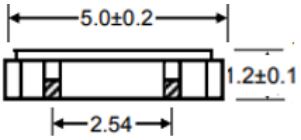
#1 Enable(Tri-State)/Disable

#2 Ground

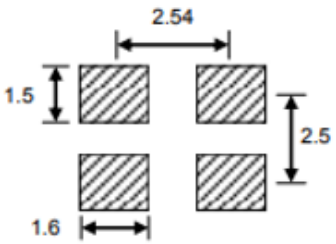
#3 Output

#4 VDD

Side View



Solder Pattern for reference



NextGen Components,Inc.

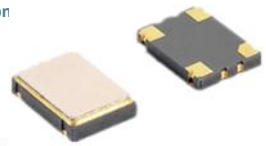
ORIGINAL PART SERIES NO.: **COK75**

KHZ SMD OSCILLATOR

MAIN FEATURE

• 32.768KHz standard Frequency range • 1.8V, 2.5V, 3.3V, 5.0V option

RFQ
Request For Quotation



L7.0*W5.0*H1.7mm

APPLICATION

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Startup Time		-	-	10	ms	
Supply Current		-	-	15	mA	
Rise/ Fall time		-	-	10	ns	
Storage Temperature Range		-55	-	+125	°C	
Aging per year		-	±5		ppm	

PART NUMBER GUIDE

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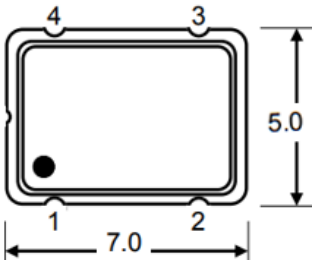
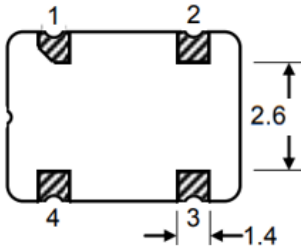
Top View



Bottom View



Pin Function

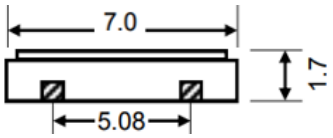
#1 Enable(Tri-State)/Disable

#2 Ground

#3 Output

#4 VDD

Side View



Solder Pattern for reference