NextGen Components,Inc.

PART CODE: **XS11M05920L006**

SPECIFICATION SHEET

SPECIFICATION SHEET NO.	R0906-XS11M05920L006
DATE	Sep. 6, 2024
REVISION	A0
DESCRIPITION	DIP Crystal, 49S Type, L11.5*W4.65*H3.5mm, 2 pins, 11.0592MHz, +/-50ppm, CL 20pF, Stability +/-50ppm @Operating Temp. Range -10°C ~+60°C, ESR 50 ohm Max, RoHS/RoHS III compliant
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	TGS CS 11M0592A50-20-50-10-50 BLF
PART CODE	XS11M05920L006

VENDOR APPROVE	
Issued/Checked/Approved	  
DATE: Sep. 6, 2024	

CUSTOMER APPROVE
DATE:

9/24/2024

NextGen Components,Inc.

PART CODE: **XS11M05920L006**

DIP CRYSTAL 49S TYPE 2 PINS

MAIN FEATURE

- DIP Crystal, 49S Type, L11.5*W4.65*H3.5mm, 2 pins
- Low cost, High precision, High frequency stability
- Reflow Profile Condition 260 °C Max.
- Wide Frequency Range
- Cross more competitors part
- RoHS/RoHS III compliant

APPLICATION

- Bluetooth, wireless communication set
- Communication Electronics

RFQ
Request For Quotation

PART CODE GUIDE

XS	11M05920	L	006
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1) XS: Part family Code for DIP Crystal, 49S Type, L11.5*W4.65*H3.5mm, 2 pins (CS)

2) 11M05920: Frequency range code for 11.0592MHz

3) L: DIP type, Package Bulk

4) 006: Specification code for original part No.: **TGS CS 11M0592A50-20-50-10-50 BLF**

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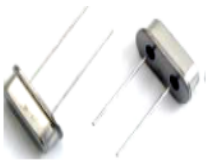
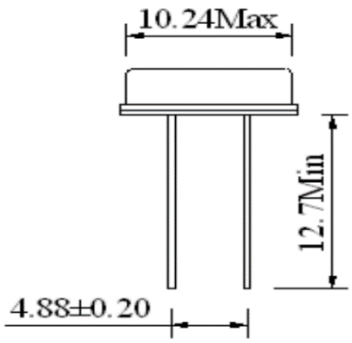
DIP CRYSTAL 49S TYPE 2 PINS

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

Image for reference



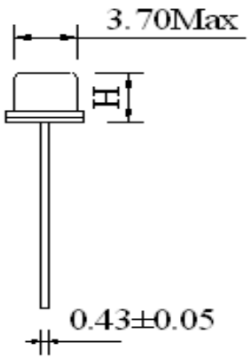
CS



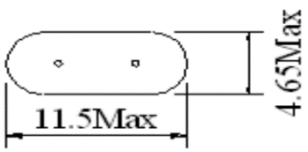
Marking

Line 1: TGS+ CL

Line 2: Freq. Range+ Internal Code



H: 3.5mm



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DIP CRYSTAL 49S TYPE 2 PINS

ELECTRICAL PARAMETERS

Parameter		Part No. Symbol	Units	Value			Condition
				Min.	Typical	Max.	
Original Manufacturer		TGS	TGS Crystals				
Holder Type		CS	DIP Crystal, 49S Type, L11.5*W4.65*H3.5mm, 2 pins				
Frequency Range		11M05920	MHz	11.0592			
Mode of Oscillation		A		AT Fundamental			
Frequency Tolerance		50	ppm	-50		+50	@25°C
Load Capacitance		-20	pF	20			
Stability over Operation Temperance		-50	ppm	-50		+50	
Operation Temperance		-10	°C	-10		+60	
Storage Temperance			°C	-40		+85	
Equivalent Series Resistance (ESR)		-50	Ω			50	
Drive Level			μW			100	
Shunt Capacitance (C0)			pF	0		7.0	
Motional Capacitance (C1)			fF	N/A			
DLD2			Ω	N/A			
FLD2			ppm	N/A			
RDL2			Ω	N/A			
SPDB			dB	N/A			
Aging			ppm/year			±5	@1st year
Insulation Resistance			MΩ	500			@100VDC ± 15VDC
Others	**Package**	B	Bulk				
	RoHS Status	LF	RoHS III compliant				
	Add Value		N/A				
	Internal Control Code *		N/A				

Note: 1) Original Part Number: **TGS CS 11M0592A50-20-50-10-50 BLF**

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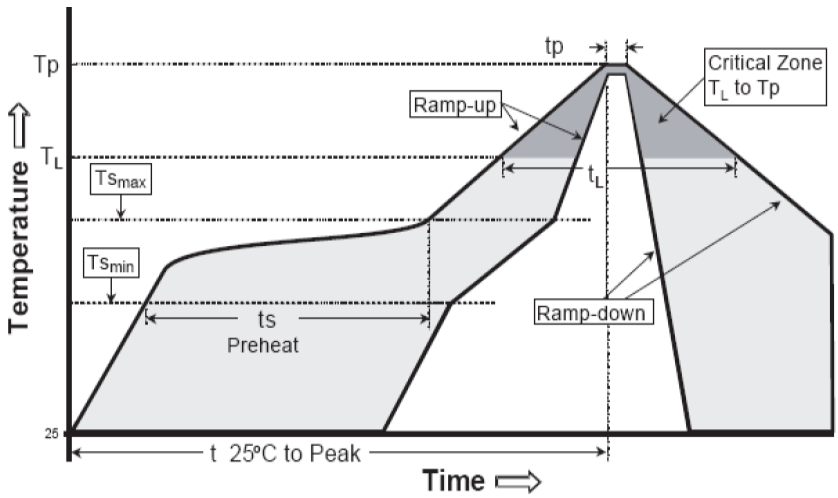
SUGGESTED REFLOW PROFILE (For Reference Only)

Total time: 200 Sec. Max. Solder melting point: 220℃



Profile Feature		Pb-Free Assembly
Average Ramp-up Rate (Ts Max to Tp)		3℃/second Max
Preheat	**Temperature Min (Ts Min.)**	140℃
	Temperature Max (Ts Max.)	180℃
	Time (ts Min. to ts Max.)	70 ~ 100 seconds
Time maintained above	**Temperature (TL)**	240℃
	Time (tL)	20 ~ 50 seconds
Peak/Classification Temperature (Tp)		250 ℃
Time within 5℃ of actual Peak Temperature (tp)		7 ~ 8 seconds
Ramp-down rate		6 ℃ /Second Max.
Time 25 ℃ to Peak Temperature		6 minutes Max.

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CHARACTERISTICS

Units and values indicated with { } in this specification are the former units and the specified values.

Standard atmospheric conditions:

Unless otherwise specified the standard range of atmospheric conditions for making measurements and tests is as follows:

Ambient temperature: 15℃ to 35℃
Relative humidity : 25% to 85%
Air pressure : 86 to 106 k Pa

If there is any doubt about the results measurements shall be made within the following limits:

Ambient temperature : 25± 1℃
Relative humidity : 63% to 67%
Air pressure : 86 to 106 k Pa

Operating temperature range:

The operating temperature range is the range of ambient temperatures at which the quartz crystal oscillator can be stored without damage. Conditions are as specified elsewhere on these specifications.

Operating temperature range: -20℃ to +70℃

Storage temperature range:

The storage temperature range is the range of ambient temperatures at which the quartz crystal oscillator can be stored without damage. Conditions are as specified elsewhere on these specifications.

Storage temperature range: -40℃ to +85℃

Mechanical characteristics

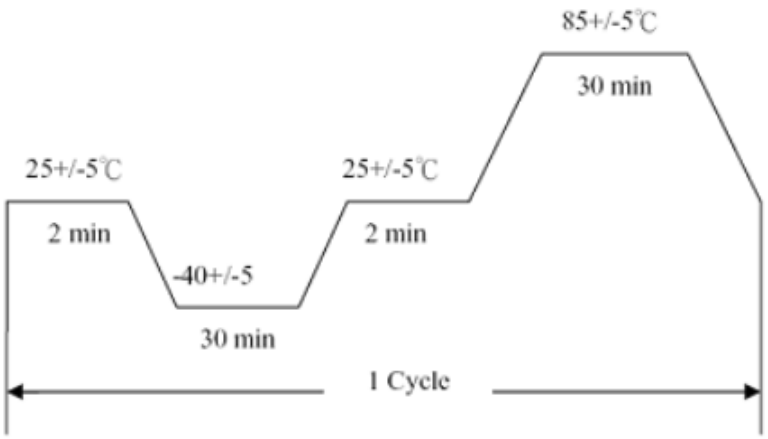
Provided that measurement shall be carried out after letting it alone in the room temperature for 1h

Item		specifications	
1	Shock	Shock Dropping three times from the height of 50cm onto hard wooden board of thickness more than 30mm.	
2	Vibration	(1) Vibration Frequency	10~55HZ
		(2) Cycle	1 to 2 Min
		(3) Amplitude	0.8mm
		(4) Direction	x. y. z
		(5) Time	2hr for each direction
3	Terminal Strength	(1) Pulling	a) Body of specimen shall be fixed and 8.82N of tension weight shall be supplied gradually to axial direction of terminals/lead-wires for 30s
			b) After above test a)there is no observation of any visual damages on the specimen
		(2) Bending	a) Body of specimen shall be fixed and 90 degree bending shall be given being supplied 225g tension weight, Afterthatterminalsl1ead-wires shall be straightened the same bending and straightening shall be supplied to the opposite direction in the same axial
			b) After above tesla)there is no observation of any visual damages on the specimen
4	Stealing Tightness	There is no observation of gas bubble after specimen put into alcohol below1atm for 3 min.	
5	Solder ability	Terminals/lead-wires of specimen shall be dipped into solder melted tank at230± 5℃ for 3± 0.5sec. Dipping depth shall be 2mm from the bottom of specimen's body. (After applying ROSIN flux) Soldering portion shall be covered in over 90% of terminals/lead-wires dipped	
6	Resistance to Soldering Heat	Terminals/lead-wires of specimen shall be dipped into solder melted tank at350± 10℃'C for 3-4sec. or 250± 5℃ for 5± 1sec*'Frequency variation shall be within ± 5ppm and equivalent resistance less than ± 15% max after the testNote: Measuring the frequency should be done after keeping test samples at room temperature for 24 hours	
*'Frequency variation shall be within ± 5ppm and equivalent resistance less than ± 15% max after the test Note: Measuring the frequency should be done after keeping test samples at room temperature for 24 hours			

Mechanical characteristics

Provided that measurement shall be carried out after letting it alone in the room temperature for 1h

Item		specifications
1	Humidity	It alone at 40℃ +-2℃ in humidity of 90~95% for 48h
2	Storage in Low Temperature	It alone at -40℃ +-2℃ for 240h
3	Storage in High Temperature	It alone at 85℃ +-2℃ for 240h
4	Temperature Cycle	The following temperature cycle (10 cycles) Refer to below Fig. Temperature shift from low to high, high to low shall be done in 1℃'C /min



*'Frequency variation shall be within ± 5ppm and equivalent resistance less than ± 15% max after the test
Note: Measuring the frequency should be done after keeping test samples at room temperature for 24hours

Notes

1. Only the lead should be heated when soldering
In case that the package temperature is exceeding 150℃ It may impair the crystal or may cause the crystal quartz 10 destroy.

2. Pulling the lead strongly may cause cracking of the hermetic grass seal bending the lead closely from the case may also cause same problem so when the lead needs to be bent please leave move than 05.mm of lead from the case.

3. Too much shock or vibration is not allowed. According to conditions such as machine shock during the assembly the internal quartz crystal might be damaged.

Please check your conditions carefully when using it in advance

4. Don't storage or use in the environment that temperature may change rapidly to avoid the condensation. And also we recommend to storage the products in the normal environment (Temperature humidity)

5. This product can be subjected to ultrasonic cleaning. However since the oscillator may be affected depending on the condition be sure to check it.

6. Applying excessive drive level to the quartz crystal may cause deterioration for characteristics or damage Circuit design must be such as to maintain a proper drive level.

7. Unless adequate negative resistance is allocated in the oscillation circuit startup time of oscillation may be increased or no oscillation may occur In order to avoid this provide enough negative resistance in the circuitry design.

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