

SPECIFICATION SHEET

SPECIFICATION SHEET NO.	Q0315- MI2016ASR47MTA
DATE	March 15, 2023
REVISION	A0
DESCRIPTION	<p>SMD Multilayer Chip Power Inductors, MI series, 2 pads Size Code 0806 (2016 Metric), Dimension: L2.0*W1.6*H0.9mm, Inductance: 0.47μH, Tolerance ±20%, DC Resistance 0.1 ohm Max. Self-Resonant Frequency (S.R.F) 100MHz Min. Saturation Current (Isat) 1.35A Max. Heat Rating Current (Irms) 1.5 A Max. Operating Temp. Range -55°C ~+125°C. Package in Tape/Reel, 3000pcs/Reel, RoHS/RoHS III Compliant</p>
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	Aillen MCPI201610S-R47MT
PART CODE	MI2016ASR47MTA

VENDOR APPROVE

Issued/Checked/Approved



DATE: March 15, 2023

CUSTOMER APPROVE

DATE:

3/15/2023

SMD MULTILAYER CHIP POWER INDUCTORS MI SERIES

MAIN FEATURE

- Higher DC Bias Current And Lower DC Resistance Due To Trench Technology
- Low Profile And Thin Thickness
- Monolithic Structure For High Reliability
- Excellent Solderability And High Heat Resistance
- No Cross Coupling Due To Magnetic Shield
- Operating Temperature -55~+125°C (Including Self - Temperature Rise)
- Cross Competitors Parts
- RoHS III Complaint



APPLICATION

- DC-DC Converter Circuits For Mobile Phones, Wearable Devices, DVCs, HDDs, Etc.

RFQ

[Request For Quotation](#)

PART CODE GUIDE

MI	2016	A	S	R47	M	T	A
1	2	3	4	5	6	7	8

1) **MI**: SMD Multilayer Chip Power Inductors, MI series, 2 pads

2) **2016**: Size Code 0806 (2016 Metric), Dimension: L2.0*W1.6mm

3) **A**: Thickness Code, **A: 1.0mm Max.**; B: 1.2mm Max.

4) **S**: Feature type, S: Standard

5) **R47**: Nominal Inductance Code, **R47: 0.47μH**; 1R0: 1.0μH;1R5:1.5μH; 2R2: 2.2μH; 3R3: 3.3μH; 4R7: 4.7μH; 6R8: 6.8μH;100: 10μH

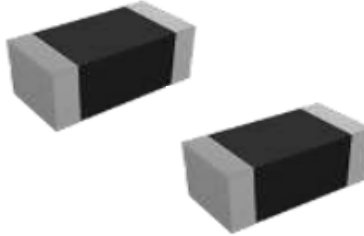
6) **M**: Inductance Tolerance: **M: ±20%**; N: ±30%

7) **T**: Package in Tape/Reel, 3000pcs/Reel

9) **A**: Internal control or Customer's Special Code (A~Z or 1~9)

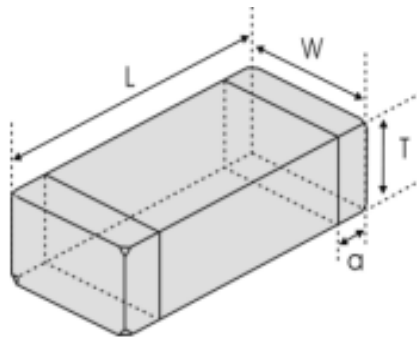
SMD MULTILAYER CHIP POWER INDUCTORS MI SERIES

Image For Reference



MI Series

Size Code 0806 (2016 Metric),
Dimension: L2.0*W1.6*H0.9mm,



Symbol	Dimension (mm)	Dimension (inch)
L	2.0 (+0.3, -0.1)	0.079 (+0.012, -0.0041)
W	1.6±0.2	0.063±0.008
T	0.9±0.1	0.035±0.004
a	0.5±0.3	0.020±0.012

SMD MULTILAYER CHIP POWER INDUCTORS MI SERIES
ELECTRICAL PARAMETERS

Parameter	Part No. Symbol	Units	Value			Condition
			Min.	Typical	Max.	
Series Code	MI	SMD Multilayer Chip Power Inductors, MI series, 2 pads				
Size Code	2016	0806 (2016 Metric), Dimension: L2.0*W1.6mm				
Thickness	A	H0.9±0.1mm (0.035±0.004 inch)				
Feature Type	S	Standard				
Inductance (L)	R47	μH		0.47	@25°C	
Inductance Test Frequency (Freq.)		MHz	1.0			
DC Resistance (DCR)		Ω		0.08	0.10	
Operation Temperance		°C	-55		+125	
Storage Temperance		°C	-55		+125	
Self-Resonant Frequency (S.R.F.)		MHz		100		
Saturation Current (I sat)		A		1.60	1.35	
Heat Rating Current (I rms)		A			1.5	
Inductance Tolerance	M	%	±20			
Others	Package	T	Package in Tape/Reel, 3000pcs/Reel			
	RoHS Status		RoHS III compliant			
	Add Value		Blank: N/A			
	Internal Control Code	A	Internal control or Customer's Special Code (A~Z or 1~9)			

Note:

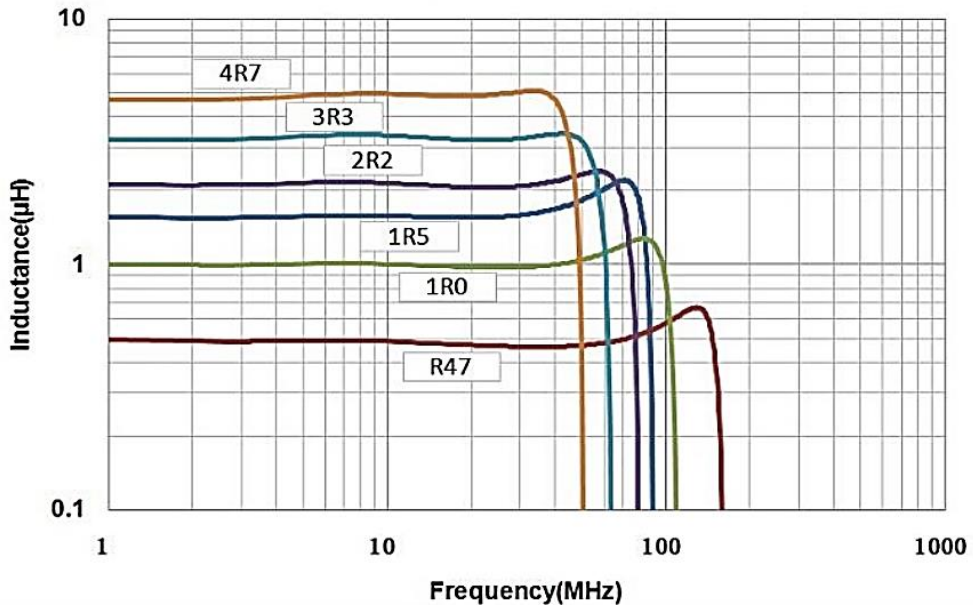
- 1) Rated current: Isat or Irms, whichever is smaller;
- 2) I sat: DC current at which the inductance drops approximate 30% from its value without current;
- 3) I rms : DC current that causes the temperature rise (ΔT =40°C) from 20°C ambient.

03/01/2023

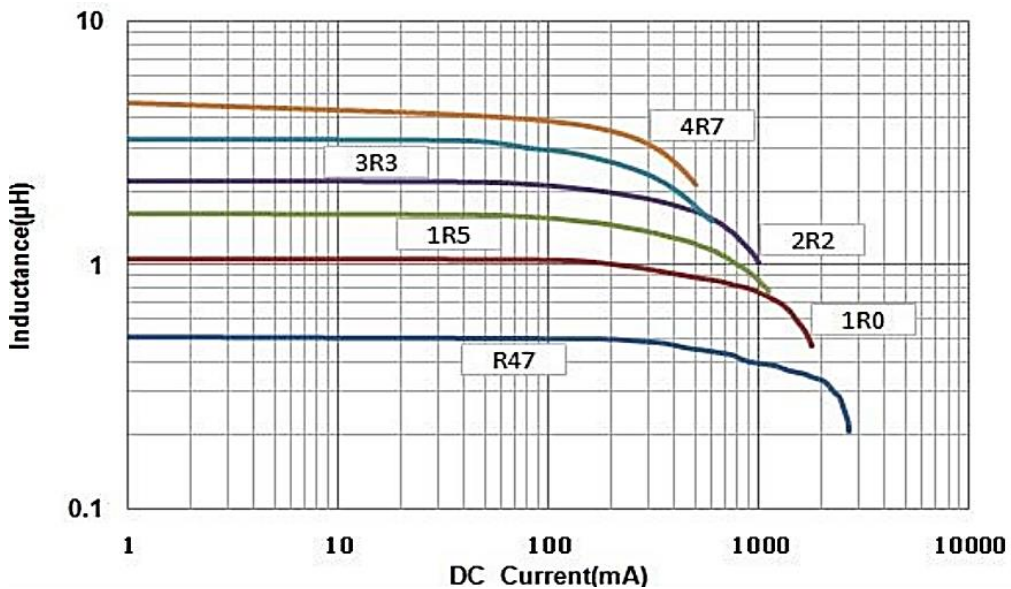
SMD MULTILAYER CHIP POWER INDUCTORS MI SERIES

TYPICAL ELECTRICAL CHARACTERISTICS

Inductance vs. Frequency Characteristics



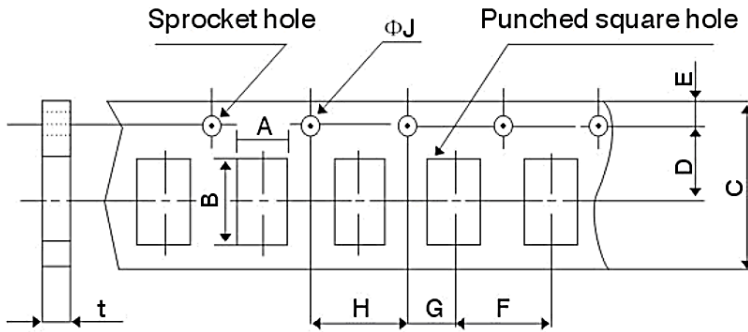
Inductance vs. DC Current Characteristics



SMD MULTILAYER CHIP POWER INDUCTORS MI SERIES

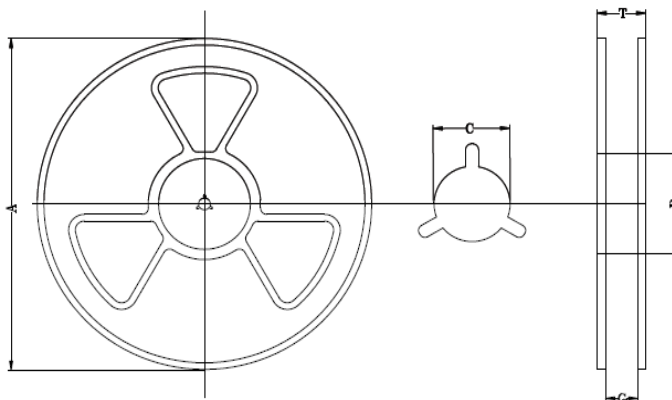
TAPE (Unit: mm), 3000pcs/Reel

Applicable standard JIS C0806 and IEC 60286.



Tape Dimension	
Symbol	Dimension (mm)
A	1.85±0.10
B	2.25±0.10
C	8.00±0.30
D	3.50±0.05
E	1.75±0.10
F	4.00±0.10
G	2.00±0.05
J	∅1.5 (+0.1,-0)

REEL (Unit: mm)



Reel Dimension	
Symbol	Dimension (mm)
A	∅180±3.0
B	60.0±1.0
C	13.0±0.20
T	14.4 Max.
G	8.40 (+1.5,-0)

SMD MULTILAYER CHIP POWER INDUCTORS MI SERIES

STORAGE

Storage period

Products which inspected in QC dept. over 6 months ago should be examined and used, Solder ability should be checked if this period is exceeded.

Storage conditions

1. Products should be storage in the warehouse on the following conditions

Temperature: $\leq 40^{\circ}\text{C}$; Humidity : $\leq 70\%$ relative humidity

No rapid change on temperature and humidity

2. Don't keep products in corrosive gases such as sulfur, chlorine gas or acid, or it may cause oxidization of electrode, resulting in poor solder ability.

3. Products should be storage on the palette for the prevention of the influence from humidity, dust and so on.

4. Products should be storage in the warehouse without heat shock, vibration, direct sunlight and so on.

5. Products should be storage under the airtight packaged condition.

DISCLAIMER

NextGen Components, Inc. reserves the right to make changes to the product(s) and or information contained herein without notice. No liability is assumed as a result of their use or application. No rights under any patent accompany the sale of any such product(s) or information

3/15/2023