HITANO ENTERPRISE CORP.

MULTILAYER CHIP INDUCTOR SMI SERIES

Electrical Specification

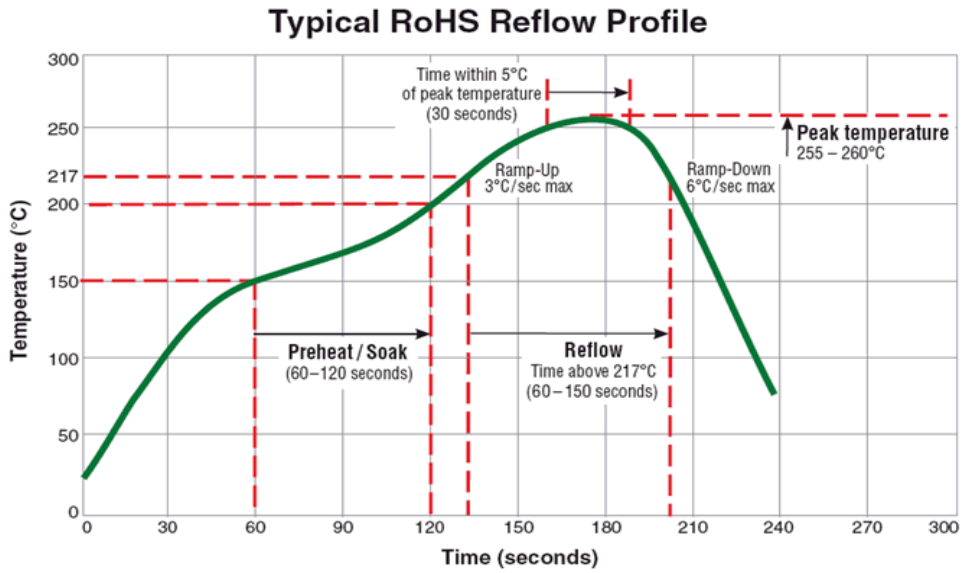
Size 1008 High Current Type

Part No.	Inductance (uH)	Tolerance	Test Condition	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
SMI1008HTR47□□□	0.47	±20%	1MHz, 250mV	100	0.088	1800
SMI1008HTR68□□□	0.68	±20%	1MHz, 250mV	90	0.113	1700
SMI1008HTR82□□□	0.82	±20%	1MHz, 250mV	80	0.125	1700
SMI1008HT1R0□□□	1.0	±20%	1MHz, 250mV	60	0.138	1600
SMI1008HT1R2□□□	1.2	±20%	1MHz, 250mV	60	0.138	1600
SMI1008HT1R5□□□	1.5	±20%	1MHz, 250mV	50	0.163	1500
SMI1008HT1R8□□□	1.8	±20%	1MHz, 250mV	50	0.163	1500
SMI1008HT2R2□□□	2.2	±20%	1MHz, 250mV	40	0.213	1300
SMI1008HT3R3□□□	3.3	±20%	1MHz, 250mV	30	0.200	1200
SMI1008HT4R7□□□	4.7	±20%	1MHz, 250mV	25	0.250	1100

■ Operating Temperature: -40℃ to +125℃

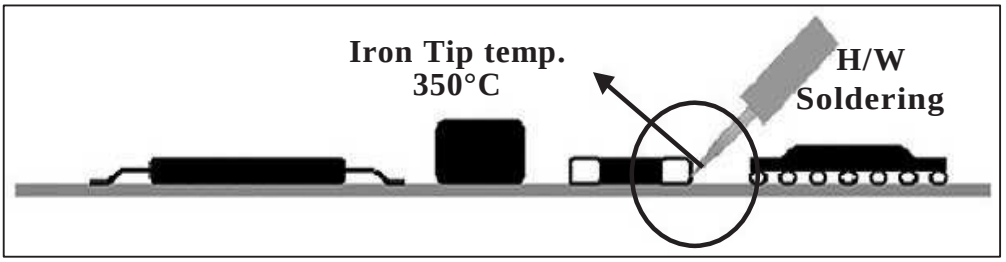
■ Soldering Profile

Reflow Soldering



Manual Soldering

Soldering iron tip temperature: 350°C max / within 3 seconds.



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Environmental Characteristics

Mechanical Performance Test

Item	Requirement	Test Method
Resistance to Soldering Heat	Appearance: No damage More than 75% of the terminal. Electrode should be covered with solder. Inductance: within ±15% of initial value Q: within ±30% of initial value Inductance: within±20% of initial value (0603 over 12uH)	Pre-heating: 150°C, 1min. Solder Composition: Sn/Ag3.0/Cu0.5 (Pb-Free) Solder Temperature: 260±5°C (Pb-Free) Immersion Time: 10±1sec.
Solderability	The electrodes shall be at least 90% covered with new solder coating	Pre-heating: 150°C, 1min. Solder Composition: Sn/Ag3.0/Cu0.5 (Pb-Free) Solder Temperature: 245±5°C (Pb-Free) Immersion Time: 4±1 sec.
Flexure Strength	The forces applied on the right conditions must not damage the terminal electrode and the ferrite.	Test device shall be soldered on the substrate Substrate Dimension: 100x40x1.6 mm Deflection: 2.0 mm Keeping Time: 30 sec. *For 0402, substrate dimension is 100x40x0.8 mm
Vibration		Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1 min. Amplitude: 1.5 mm Time: 2 hrs for each axis (X, Y & Z), total 6 hrs

Electrical Performance Test

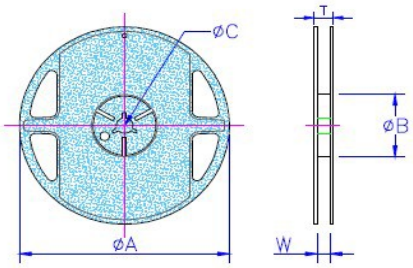
Item	Requirement	Test Method
Inductance	Refer to standard electrical characteristic spec.	HP4291B
Q		HP4291B
SRF		HP4291B
DC Resistance RDC		Agilent 34401A
Rated Current IDC		Applied the current to coils, The inductance change should be less than 10% to initial value

Climatic Test

Item	Requirement	Test Method
Damp Heat with Load	Appearance: No damage L change: within±10% of initial value Q change: within±30% of initial value	Temperature: 40±2°C Relative Humidity: 90 ~ 95% Time: 1000 hrs Measured after exposure in the room condition for 24 hrs
Temperature Cycle		One cycle: Step / Temperature (°C) / Time (min.) 1 / -40±3 / 30 2 / 25±2 / 3 3 / 85±3 / 30 4 / 25±2 / 3 Total: 100 cycles Measured after exposure in the room condition for 24 hrs
High Temperature Resistance		Temperature: 85±3°C Relative Humidity: 20% Applied Current: Rated Current Time: 1000 hrs Measured after exposure in the room condition for 24 hrs
Low Temperature Resistance		Temperature: -25±3°C Relative Humidity: 0% Time: 1000 hrs Measured after exposure in the room condition for 24 hrs

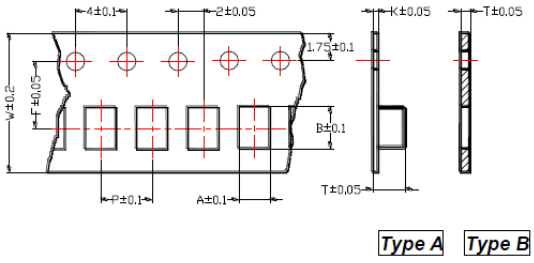
■ Packaging

Reel Specifications



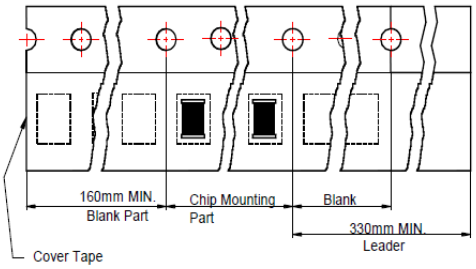
Type	A (mm)	B mm	C mm	W mm	T mm	Quantity (EA)	
						Paper Tape (Type B)	Polystyrene Tape (Type A)
SMI0603F	178±1	60.0+0.5	13.0±0.2	9.00±0.5	12.0±0.15	4,000	-
SMI0805F(≦2.2uH)	178±1	60.0+0.5	13.0±0.2	9.00±0.5	12.0±0.15	4,000	-
SMI0805F(≧2.7uH)	178±1	60.0+0.5	13.0±0.2	9.00±0.5	12.0±0.15	-	3,000
SMI1206F	178±1	60.0+0.5	13.0±0.2	9.00±0.5	12.0±0.15	-	3,000
SMI0805H	178±1	60.0+0.5	13.0±0.2	9.00±0.5	12.0±0.15	4.000	-
SMI0806H	178±1	60.0+0.5	13.0±0.2	9.00±0.5	12.0±0.15	-	3,000
SMI1008H	178±1	60.0+0.5	13.0±0.2	9.00±0.5	12.0±0.15	-	3,000

Taping Specifications



Tape Material

Carrier tape：Polystyrene for 0805(≦2.2uH) 1206
Paper for 0603 0805(≧2.7uH)
Cover type：Polystyrene



Type	A mm	B mm	T mm	W mm	P mm	F mm	K mm	Tape Type
SMI0603F	1.05	1.85	0.95	8.0	4.0	3.5	-	B
SMI0805F(≦2.2uH)	1.50	2.42	0.95	8.0	4.0	3.5	-	B
SMI0805F(≧2.7uH)	1.50	2.35	1.45	8.0	4.0	3.5	0.22	A
SMI1206F	1.88	3.50	1.27	8.0	4.0	3.5	0.22	A
SMI0805H	1.45	2.25	0.95	8.0	4.0	3.5	-	B
SMI0806H	1.88	2.40	1.23	8.0	4.0	3.5	0.23	A
SMI1008H	2.20	2.85	1.40	8.0	4.0	3.5	0.23	A