◆Scope

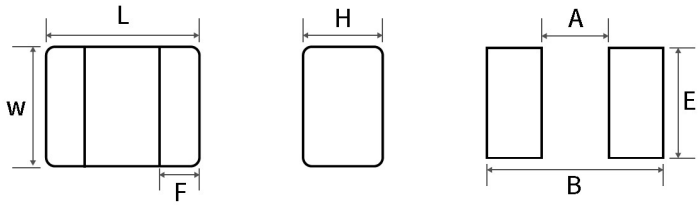
This specification applies to the SLO201610T Series of SMD power inductors.

◆Lead Free PartNumbering

SLO	201610	T	1R0	M	T	T
(1)	(2)	(3)	(4)	(5)	(6)	(7)

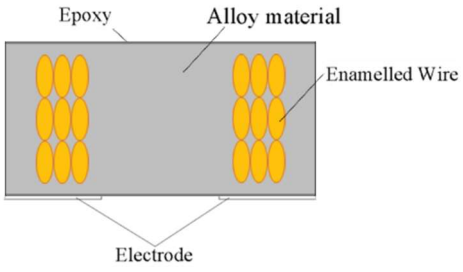
(1) Series Type
(2) Dimension: LxWxH
(3) Material Code
(4) Inductance:R68=0.68uH;1R0=1.0μH
(5) Inductance Tolerance:M=±20%,N=±30%
(6) Company Code
(7) Packaging: packed in embossed carrier tape

◆Dimensions



Series	L(mm)	W(mm)	H(mm)	F(mm)	Recommended Land Patterns		
					A(mm)	B(mm)	E(mm)
SLO201610T	2.0±0.2	1.6±0.2	1.0Max.	0.5Typ.	0.8Typ.	2.1Typ.	1.7Typ.

◆Structural drawing



No.	Component	Material
①	Body	Alloy material
②	Winding	Enamelled Wire
③	Shield	Epoxy
④	Electric	Base plating-Cu Base plating-Ni Base plating-Sn

Specification

Part No.	Inductance Ls(uH)	Direct Current Resistance DCR(mΩ)		Saturation Current Isat(A)	Temperature Rise Current Irms(A)
SLO201610TR10MTT	0.10±20%	12.0 Max	7.00 Typ	8.50 Max	8.00 Max
SLO201610TR11MTT	0.11±20%	13.0 Max	7.50 Typ	8.20 Max	7.50 Max
SLO201610TR15MTT	0.15±20%	14.0 Max	8.00 Typ	8.10 Max	7.10 Max
SLO201610TR22MTT	0.22±20%	18.0 Max	11.0 Typ	7.60 Max	6.40 Max
SLO201610TR24MTT	0.24±20%	19.0 Max	12.0 Typ	7.50 Max	6.30 Max
SLO201610TR33MTT	0.33±20%	22.0 Max	17.0 Typ	6.50 Max	5.40 Max
SLO201610TR47MTT	0.47±20%	25.0 Max	22.0 Typ	5.60 Max	5.10 Max
SLO201610TR68MTT	0.68±20%	32.0 Max	25.0 Typ	4.80 Max	4.40 Max
SLO201610T1R0MTT	1.0±20%	43.0 Max	35.0 Typ	4.20 Max	4.10 Max
SLO201610T1R5MTT	1.5±20%	100.0 Max	80.0 Typ	3.00 Max	2.30 Max
SLO201610T2R2MTT	2.2±20%	130.0 Max	120.0 Typ	2.90 Max	2.20 Max
SLO201610T3R3MTT	3.3±20%	170.0 Max	140.0 Typ	2.00 Max	1.50 Max
SLO201610T4R7MTT	4.7±20%	220.0 Max	190.0 Typ	1.80 Max	1.40 Max
SLO201610T6R8MTT	6.8±20%	350.0 Max	320.0 Typ	1.50 Max	1.50 Max
SLO201610T100MTT	10.0±20%	580.0 Max	483.0 Typ	1.10 Max	0.70 Max

Test condition & equipment :

Item	Test condition	Test equipment
Ls	1MHz/1V	HP4263BIM3532-50 or equivalent
DCR	direct-current	HP4263BRM3545 or equivalent
Isat	1MH/1V	Microtest 6379 &6220 or equivalent
Irms	ambient temperature 20℃	Microtest 6379 &6220 or equivalent

Operating Temperature Range

-40℃～+125℃,Including self-heating

Storage Conditions

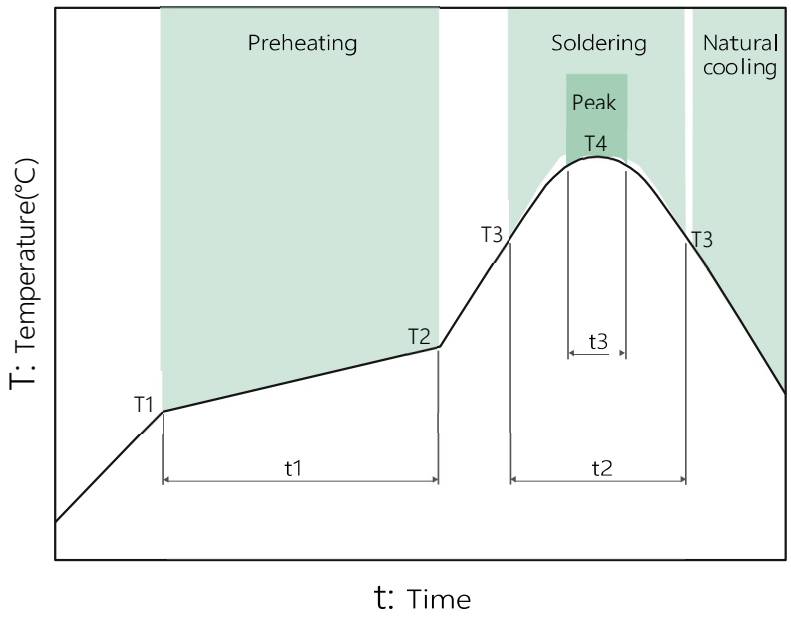
Store products in a warehouse in compliance with the following condition:

Temperature： Inductors (product with taping) -10 to +40℃;

Inductors body -40 to +85℃.

Humidity：30~70%RH

RECOMMENDED REFLOW PROFILE



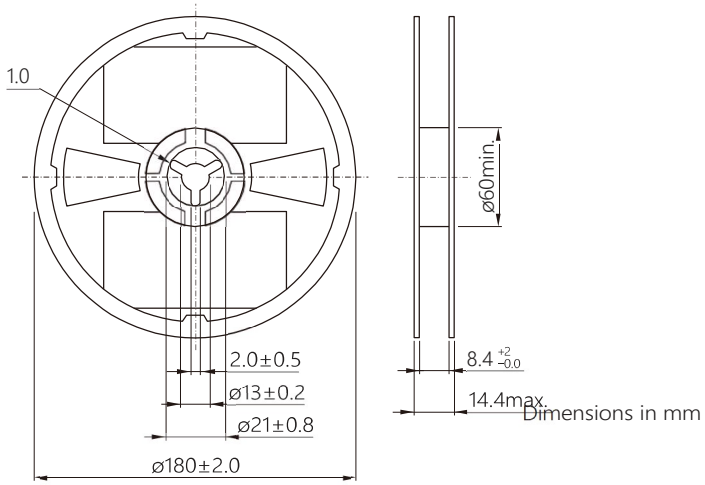
Preheating			Soldering		Peak	
Temp.		Time	Temp.	Time	Temp.	Time
T1	T2	t1	T3	t2	T4	t3
150°C	180°C	60 to 120s	230°C	30 to 50s	250 to 260°C	10s max

Reliability Mechanical

序号 No.	项目 Items	要求 Requirements	试验方法及备注 Test Methods and Remarks
1	绝缘电阻 Insulation Resistance	≥100MΩ	在电感器线圈和本体顶面中间施加 100 V 直流电压保持 60 s。 100 V DC between inductor coil and The middle of the top surface of the body for 60 seconds.
2	可焊性 Solderability	电极面 90%以上覆盖新的焊料。 90% or more of electrode area shall be coated by new solder.	在(245±5) ℃熔融的焊锡（96.5Sn/3.0Ag/0.5Cu）中浸(5±1) s。 Dip pads in flux and dip in solder pot (96.5Sn/3.0Ag/0.5Cu) at (245±5) ℃ for (5±1) seconds.
3	耐焊接热 Resistance to Soldering Heat	外观无可见机械损伤； 电感量变化率：±10%以内。 No visible mechanical damage. Inductance change: Within ±10%	在(260±5) ℃熔融的焊锡（96.5Sn/3.0Ag/0.5Cu）中浸(10±1) s。 Dip pads in flux and dip in solder pot (96.5Sn/3.0Ag/0.5Cu) at (260±5) ℃ for (10±1) seconds.
4	端子强度 Adhesion of terminal electrode	元件的端子与本体结合无松动、无脱落。 Strong bond between the pad and the core, without come off PC board.	将电感器用(260±5) ℃，(20±5) s 焊在带有 0.3 mm厚锡膏的基板上，然后用冶具垂直电极面方向加压 10 N，(10±1) s。 Inductors shall be subjected to (260±5)℃ for (20±5) s Soldering in the base whit 0.3mm solder. And then aplomb electrode way plus tax 10 N for (10±1) seconds.
5	耐高温 High temperature	外观无可见机械损伤； 电感量变化率：±10%以内。 No visible mechanical damage. Inductance change: Within ±10%	温度(+85 ± 2)℃,时间(96±2) h； Temperature is (+85±2)℃ and keep (96±2) hours.
6	耐低温 Low temperature	外观无可见机械损伤； 电感量变化率：±10%以内。 No visible mechanical damage. Inductance change: Within ±10%	温度(-40℃ ±2) ℃，时间(96±2) h； Temperature is (-40±2)℃ and keep (96±2) hours.

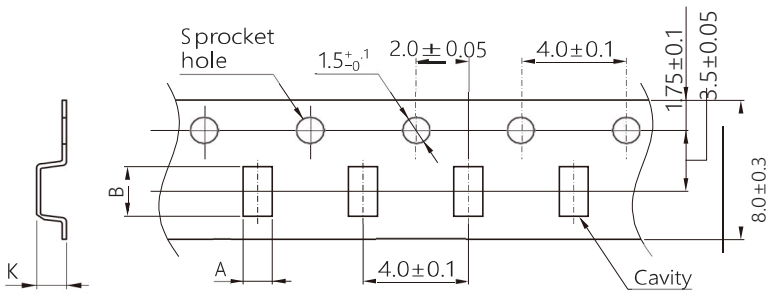
序号 No.	项目 Items	要求 Requirements	试验方法及备注 Test Methods and Remarks
7	温度变化 Thermal shock	外观无可见机械损伤；电感量变化率：±10%以内。 No visible mechanical damage. Inductance change: Within ±10%	(-40±3) ℃,时间(30±3) min ↔ (125℃±2) ℃/(30±3) min，转换时间(2~3) min,循环32次； 在室温下放置 2 小时后、48 小时内测试。 The test sample shall be placed at (-40±3)℃ and (125±2)℃ for (30±3) min, different temperature conversion time is 2~3 minutes. The temperature cycle shall be repeated 32 cycles. Placed at room temperature for 2 hours, within 48 hours of testing.
8	温度特性 Temperature characteristic	电感量变化率 $P_{c\text{-}b}$,$P_{c\text{-}d}$ 不超过±20%。 Inductance change $P_{c\text{-}b}$,$P_{c\text{-}d}$: Within ±20%	a：+20 ℃ （30~45） min → b: -40 ℃ （30~45） min → c: +20 ℃ （30~45） min → d: +125 ℃ （30~45） min → e: +20 ℃ （30~45） min $P_{c\text{-}b}=\frac{L_b-L_c}{L_c}\times 100\%$； $P_{c\text{-}d}=\frac{L_d-L_c}{L_c}\times 100\%$
9	恒定湿热 Static Humidity	外观无可见机械损伤； 电感量变化率：±10%以内。 No visible mechanical damage. Inductance change: Within ±10%	将电感器放置在于湿度(93±3)%RH,温度(40±2) ℃的环境中存放(1000±2) h，在室温下放置 2 小时后、48 小时内测试。 Inductors shall be subjected to (93±3)%RH . at (60±2)℃ for (96±2) h . Placed at room temperature for 2 hours, within 48 hours of testing.
10	耐久性（寿命） Life	外观无可见机械损伤； 电感量变化率：±10%以内。 No visible mechanical damage. Inductance change: Within ±10%	温度(85 ±2)℃，时间(1000±24) h,施加 Irms，在室温下放置 2 小时后、48 小时内测试。 Inductors shall be store at (85±2)℃ for (1000±24) hours with Irms applied. Placed at room temperature for 2 hours, within 48 hours of testing.

Taping reel dimensions



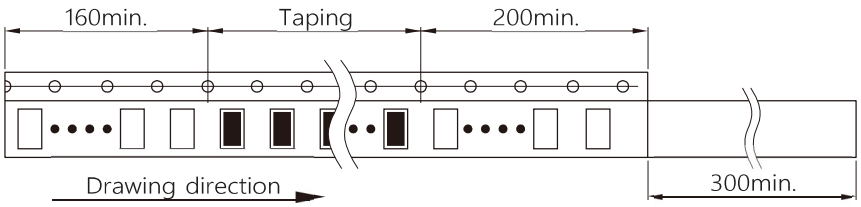
Dimensions in mm

Carrier tape dimensions



Series Type	A	B	K
SLO201610T	2.2	2.7	1.3

Dimensions in mm



Dimensionsin mm

Package quantity

Package quantity	3000 pcs/reel