LPMI

SMD Power Inductor

Size 5020

Electrical

Part Number: LPMI5020047

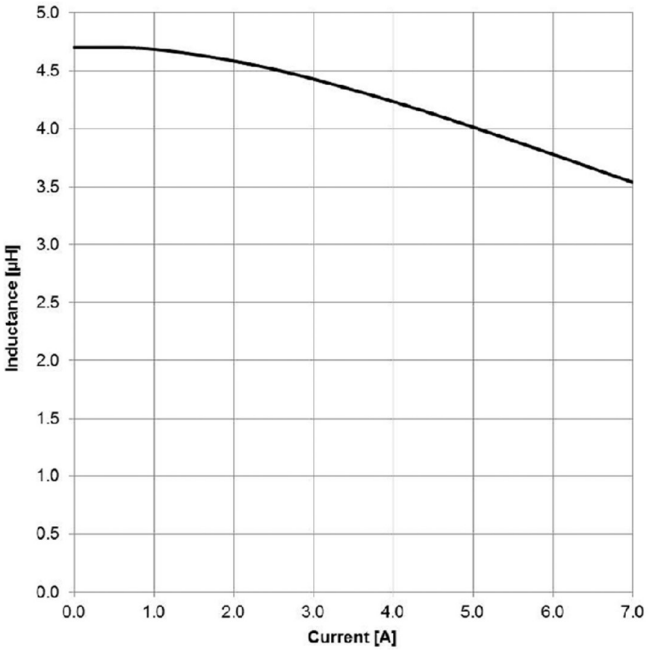
Characteristics

Properties	Test conditions		Value	Unit	Tol.
Inductance	100 kHz/ 10 mA	L	4.7	µH	±20%
Rated Current	△T=40K	I_R	2.5	A	max.
Saturation Current	|ΔL/L| < 20 %	I_{SAT}	6.0	A	typ.
DC Resistance	@20°C	R_{DC}	103	mΩ	typ.
DC Resistance	@20°C	R_{DC}	116	mΩ	max.
Self Resonant Frequency		f_{res}	27	MHz	typ.

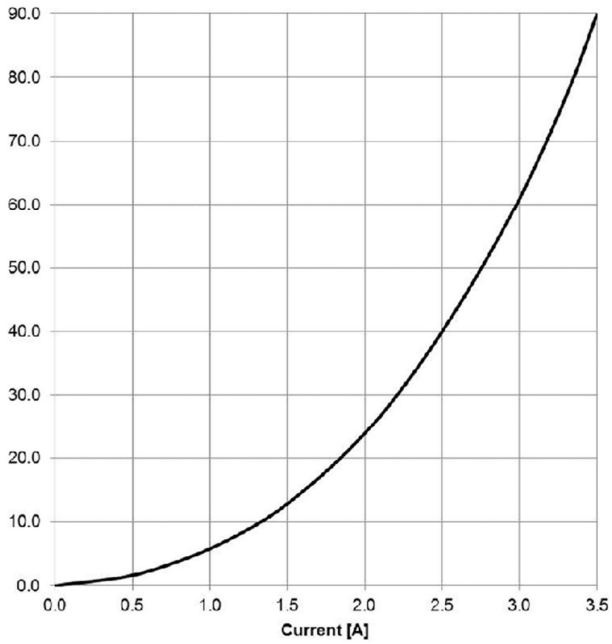
Environmental Characteristics

Suggestion: The temperature of the component does not exceed +125°C under worst case conditions	
Ambient Temperature (refer to I_R)	-40°C to +85°C
Operating Temperature	-40°C to +125°C
Storage Temperature (in original packaging)	-20°C to +40°C; 75% RH max.
Test conditions of Electrical Properties: 20°C, 33% RH if not specified differently	

Inductance vs. Current Characteristics:



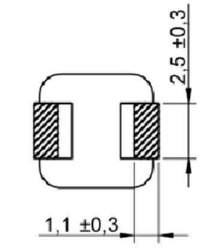
Temperature Rise vs. Current Characteristics:



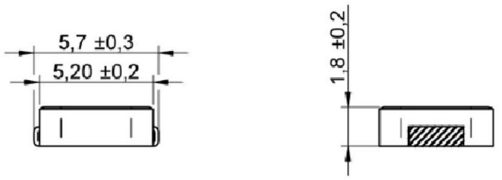
Mechanicals

5020

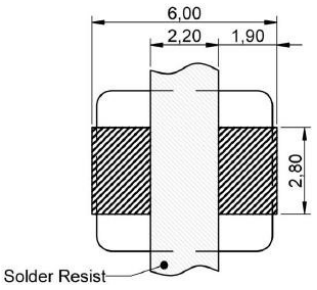
Dimensional drawing and layout recommendation



Schematic



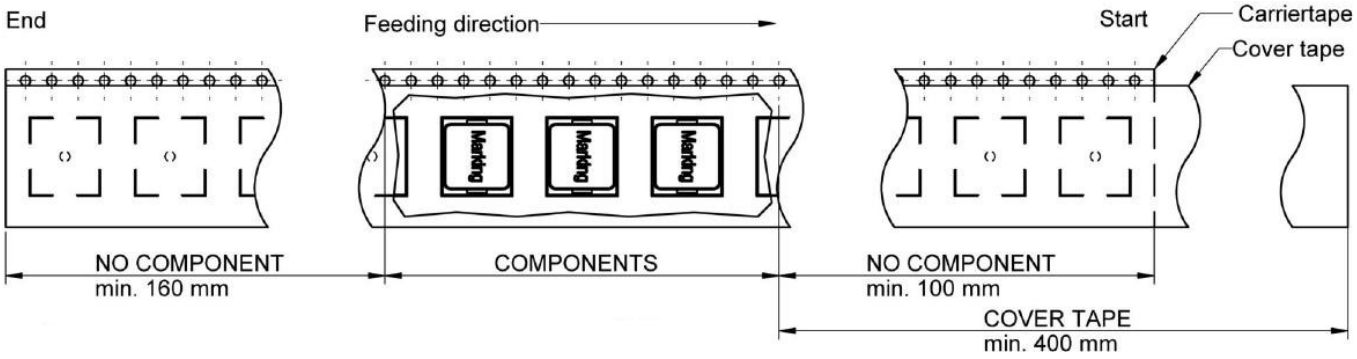
Dimensions in mm



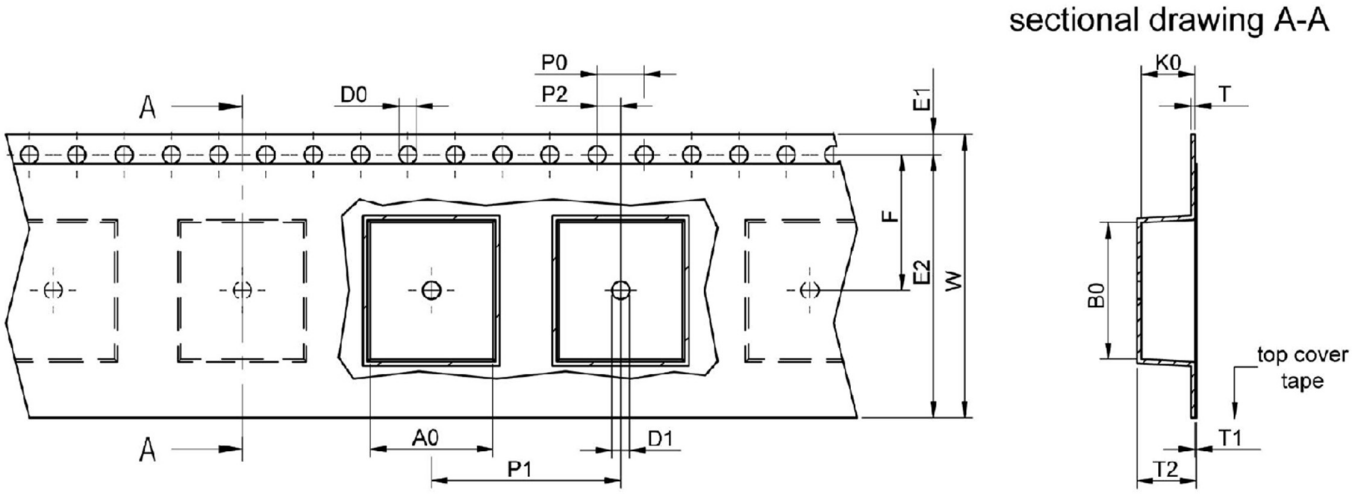
Recommended Land Pattern: [mm]

Taping and packing

Taping:



Mechanicals(Con.)

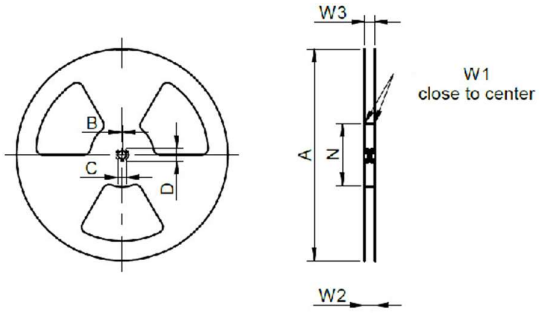


Packaging is referred to the international standard **IEC 60286 -3:2013**

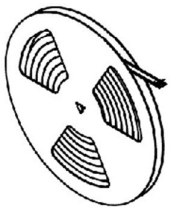
		A0	B0	W	P1	T	T1	T2	K0	D0
tolerance		typ.	typ.	±0,3	±0,1	Max.	Min.	Ref.	typ.	+0,1
size	5030	5.50	6.30	12.00	8.00	0.60	0.10	2.60	2.30	1.50

		D1	E1	E2	F	P0	P2	Tape	VPE / packaging unit
tolerance		Min.	±0,1	Min.	±0,05	±0,1	±0,05		pcs.
size	5030	1.50	1.75	10.25	5.5	4.00	2.00		3000

Reel:



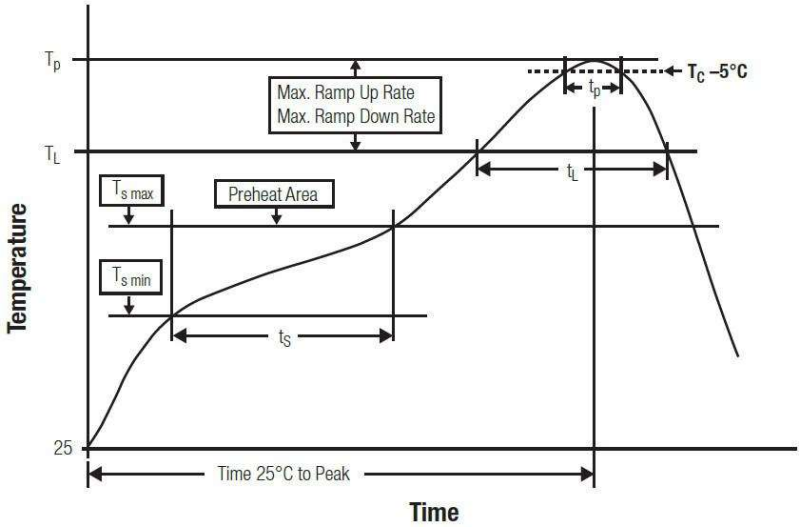
		A	B	C	D
tolerance		±2,0	min.	±0.8	min.
Tape width	12mm	330.00	1.50	13.00	20.20
	16mm	330.00	1.50	13.00	20.20
	24mm	330.00	1.50	13.00	20.20



N	W1	W2	W3	
min.	+2	max.	min.	max.
60.00	12.40	18.40	11.90	15.40
60.00	16.40	22.40	15.90	19.40
80.00	24.40	30.40	23.90	27.40

Soldering

H1: Classification Reflow Profile for SMT components:



Classification Reflow Soldering Profile:

Profile Feature		Value
Preheat Temperature Min	T_{smin}	150 °C
Preheat Temperature Max	T_{smax}	200 °C
Preheat Time t from T_{Smin} to T_{Smax}	Ts	60 - 120 seconds
Ramp-up Rate (TL O Tp)		3 °C/ second max.
Liquidous Temperature	T_L	217 °C
Time t_L maintained above T_L	t_L	60 - 150 seconds
Peak package body temperature	T_p	see table below
Time within 5°C of actual peak temperature	t_P	20 - 30 seconds
Ramp-down Rate (T_L to T_p)		6 °C/ second max.
Time 25°C to peak temperature		8 minutes max.

refer to IPC/ JEDEC J-STD-020D

Package Classification Reflow Temperature:

Properties	Volume mm³ <350	Volume mm³ 350-2000	Volume mm³ >2000
PB-Free Assembly I Package Thickness < 1.6 mm	260 °C	260 °C	260 °C
PB-Free Assembly I Package Thickness 1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
PB-Free Assembly I Package Thickness > 2.5 mm	250 °C	245 °C	245 °C

refer to IPC/ JEDEC J-STD-020D

单击下面可查看定价，库存，交付和生命周期等信息

>>Pulse(普思)