

CUSTOMER _____

CUSTOMER' S P/N _____

DESCRIPTION DIP Power Inductor

SGTE PART NO. PKP1012-100M

SAMPLE NO. S18072101 REVISION NO. B DATE 2024/3/6

SPECIFICATION FOR APPROVAL

10 ± 10%

FULLY APPROVED	REVISE APPROVED

SGTE 感通科技

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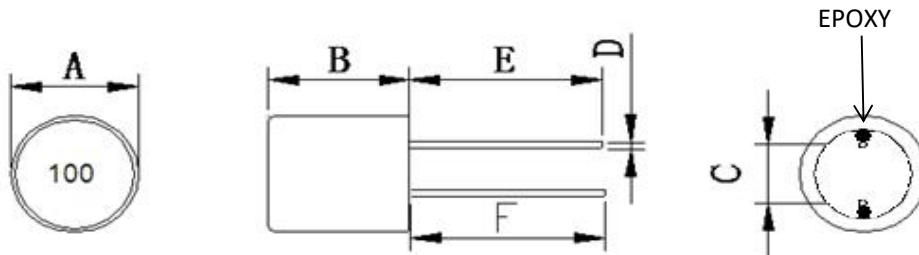
<http://www.szqte.com>

SPECIFICATION

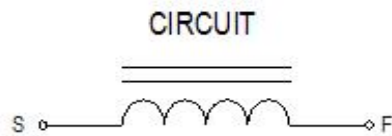
**RoHS
COMPLIANT**

Customers Part Number	Item Name	Date	
ENLCR100MROONS	DIP Power Inductor	2024/3/6	
Gan Tong Part NO.	Sample NO.	Revision No.	B
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MECHANICAL & DIMENSIONS



(UNIT: mm)	
A	11 MAX
B	13.5 MAX
C	5.0 ± 0.5
D	0.6 ± 0.5
E	3.5 ± 0.5
F	3.5 ± 0.5



ELECTRICAL REQUIREMENTS:

PARAMETER	SPECIFICATION	CONDITION	TEST INSTRUMENTS
L	$10 \pm 20\%$ uH	100KHz/0.25V	■ LCR Agilent4284A / Chroma 11300
DCR	35 max mΩ	@ 25°C	■ CH16502 IMPEDANCE METER
I-sat	6.0 A mps	$\cong 65\%$ LOA	■ A4284A+A42841A LCR METER
I rms	4.5 A mps	$\Delta T \leq 40^\circ C$	■ Chroma /11300+3302+1320+1320S

- I rms: Current that causes a 40°C temperature rise from 25°C ambient.
- I sat: DC current at which the inductance drops 35% from it' s value without current.
- All test Data is referenced to 25°C ambient.
- Operating Temperature Range: -25°C to +125°C.

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Electrical Characteristic :

PARAMETER	L	DCR	I-sat	Irms	
UNIT	uH	mΩ	A mps	A mps	
SPECIFICATION	10 ± 20%	35 max	6.00	4.50	
CONDITION	1KHz/0.25V	@ 25°C	≧ 65% LOA	ΔT ≦ 40°C	
1	9.5	20.5	ok	ok	
2	9.8	20.6			
3	10.2	20.4			
4	10.0	20.3			
5	9.8	20.2			
6	9.6	20.4			
7	9.8	20.5			
8	10.1	20.5			
9	9.5	20.5			
10	9.7	20.4			
MEAN	9.80	20.42			
R	0.70	0.35			

External Dimensions:

NO	A	B	C	D	E	F		
	11.0 Max	13.5 MAX	5.0 ±0.5	0.6 ±0.5	3.5 ± 0.5	3.5 ± 0.5		
1	10.6	12.55	5.04	0.57	3.52	3.52		
2	10.5	12.56	5.05	0.58	3.51	3.51		
3	10.6	12.55	5.03	0.58	3.55	3.55		
4	10.5	12.60	5.02	0.57	3.54	3.54		
5	10.5	12.55	5.04	0.58	3.53	3.53		
6	10.6	12.57	5.05	0.59	3.55	3.55		
7	10.6	12.54	5.06	0.58	3.54	3.54		
8	10.5	12.55	5.04	0.57	3.52	3.52		
9	10.6	12.57	5.05	0.58	3.54	3.54		
10	10.5	12.55	5.03	0.58	3.56	3.56		
MEAN	10.55	12.56	5.04	5.61	3.50	3.50		
R	0.12	0.06	0.04	0.02	0.05	0.05		

Inductance measured at 1KHz/0.25Vrms..

Electrical specifications at 25±5°C. Humidity 60±10%

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SOLDING CONDITIONS

Figure 1. Re-flow Soldering

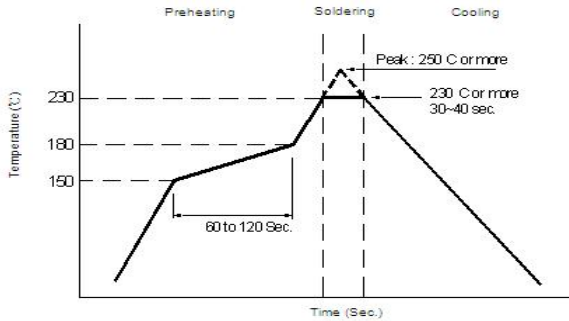
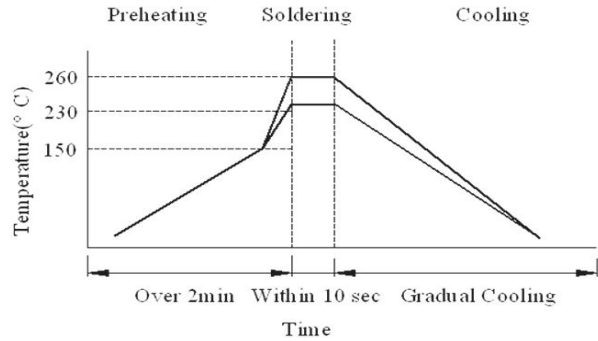


Figure 2. Wave Soldering



Soldering Iron: temperature $350^{\circ}\text{C} \pm 10^{\circ}\text{C}$, dwell time shall be less than 3 sec.

Reliability and Testing Conditions/Surface Mount Type Power Inductors

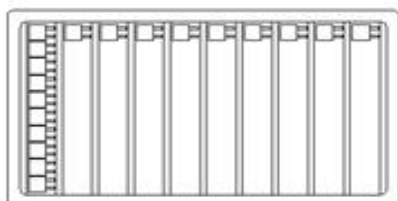
Item	Specification	Conditions															
Solderability	More than 90% of the terminal electrode should be covered with solder.																
Solder Heat Resistance	Inductance within $\pm 20\%$ of initial value and appearance shall not break.																
Heat resistance	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. Appearance shall not break.	After 500 ± 12 hours in $145 \pm 5^{\circ}\text{C}$ and 2 hour drying under normal condition.															
Cold resistance	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. Appearance shall not break.	After 500 ± 12 hours in $-40 \pm 2^{\circ}\text{C}$ and 2 hour drying under normal condition.															
Thermal shock	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. Appearance shall not break.	After 10 cycles of following condition. <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th>Step</th> <th>Temperature ($^{\circ}\text{C}$)</th> <th>Times (min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40 ± 2</td> <td>30</td> </tr> <tr> <td>2</td> <td>Room Temperature</td> <td>Within 3</td> </tr> <tr> <td>3</td> <td>145 ± 5</td> <td>30</td> </tr> <tr> <td>4</td> <td>Room Temperature</td> <td>Within 3</td> </tr> </tbody> </table>	Step	Temperature ($^{\circ}\text{C}$)	Times (min.)	1	-40 ± 2	30	2	Room Temperature	Within 3	3	145 ± 5	30	4	Room Temperature	Within 3
Step	Temperature ($^{\circ}\text{C}$)	Times (min.)															
1	-40 ± 2	30															
2	Room Temperature	Within 3															
3	145 ± 5	30															
4	Room Temperature	Within 3															
Humidity Resistance	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. Appearance shall not break.	After 500 ± 12 hours in $40 \pm 2^{\circ}\text{C}$ and 90 to 95% humidity, and 2 hour drying under normal condition.															
* Vibration Test	Inductance within $\pm 20\%$ of initial value and appearance shall not break.	After vibration for 1hour, In each of three orientations at sweep vibration ($10 \sim 55 \sim 10\text{Hz}$) with 1.52mm P-P Amplitudes.															

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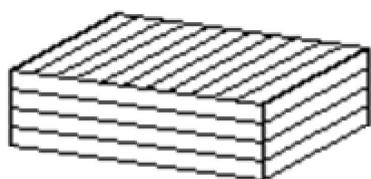
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PACKAGING



PET Size : 330*255 mm

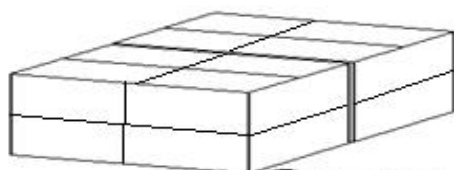
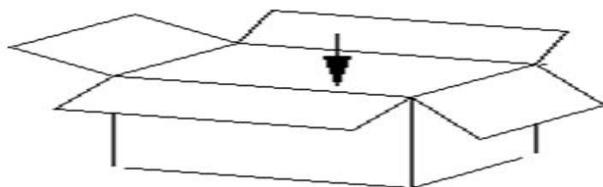
Quantity : 100PCS/PET



Small box Size : 355*275*350 mm

Quantity : 4PET/Small box

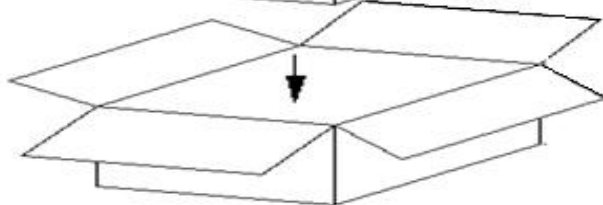
1Small box/400PCS



Big box Size : 375*280*173mm

Quantity : 8 Small box/Big box

1 Big box/3200PCS



Storage

1. Temperature and humidity conditions: Less than 40°C and 70% RH.
2. Recommended products should be used within 6 months from the time of delivery.
3. The packaging material should be kept where no chlorine or sulfur exists in the air.

Transportation

1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.