[illegible][illegible]

Human Life Declaration: If any application in/on human life about device like Aircraft / Medical Equipment / Automobile...etc, the approval must be passed by your unique and detail test or evaluation result. GOTREND Tech. only responsible for our items cost and possible rework charge !

GOTREND Technology Co., Ltd. Tel:+886-2-82271808 Fax:+886-2-82271908 Mail:service@gotrend.com.tw

	Product Series :	GNR	Brand :	GOTREND
	File Version :	GNR2512PD-6R8M-V1R0	Editor :	Teddy Sun
	Established Date :	2019.02.25	Description :	SMD Shielded Power Inductor
	Latest Edit Date :	2019.02.25	Pages :	2 / 5

* Features & Application :

- 1.Power supply PWM circuit input / output inductor
- 2.Power line noise suppression
- 3.DC-DC Converter
- 4.To help you go pass CE/FCC standard
- 5.TFT/ WiFi/ MobilePhone/ MP3/ PDA.....etc. Application
- 6.Low Profile for all compact design

* Product Identify :

Pin Foot	EMI	Color	Made In
SMD	Shield	Black	China / Taiwan

RoHS Compliant – SGS Test Report

Pb	Cd	Hg	Cr+6	PBB	PBDE
<1000ppm	ND	ND	ND	ND	ND

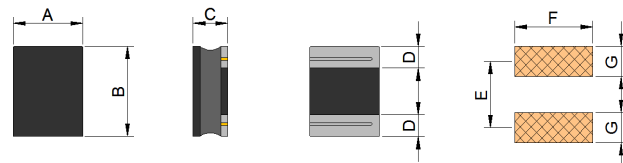
* Part No. Example :

PN	GNR	2512	P	D	- 6R8	M
ID	1	2	3	4	5	6

- 1 GOTREND Series Code
- 2 Dimension Code : 2512 = (L) 2.5 x (W) 2.0 x (H) 1.2 mm
- 3 RoHS Compliance
- 4 [D] : Material Code
- 5 Inductance : 6R8 = 6.8 uH
- 6 Tolerance : M = 20%

* Dimensions : [mm]

Recommend Pad Layout [mm]



Size Code	A (+/0.2)	B (+/0.2)	C (Max.)	D (+/0.1)	E (Ref.)	F (Ref.)	G (Ref.)
2512	2.00	2.50	1.20	0.85	1.70	2.10	0.90

* Operating & Storage Condition :

- 1.Storage Condition : -40 ~ +125 ° C / RH 65 ± 10%
- 2.Storage Life Time : 6 Months @ 20 ° C / RH 65% (no seal off)
- 3.Operating Condition : -40 ~ +125 ° C (Including self-temperature rise)

Attention & Caution:

- * Keep out of splashing water or salt water
- * Toxic Gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)
- * Vibrations or shocks which exceed the specified condition
- * Dew condense
- * Please be careful for the stress to this product by board flexure or something after the mounting.

* Test Condition :

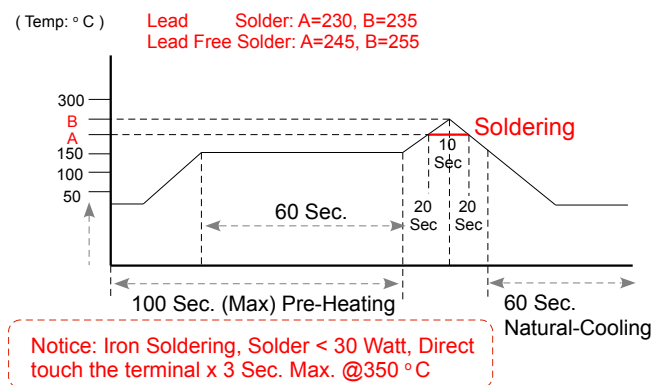
Equipment	1.L – WK3260 LCR Meter 2.DCR – Twintex TM8089A 3.Isat / Irms – WK3260 + 3265B DC-Bias 4.Dimension - Mitutoyo 5.Temperature – TECPEL 305A
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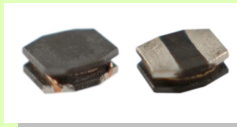
Ambient	Temperature 20 ± 5 ° C Humidity RH 65 ± 20%
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If there may be any doubt on the test result,
Measurement shall be made within the following
limits:

Ambient	Temperature 25 ± 5 ° C Humidity RH 75 ± 10%
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* Recommend IR Reflow Curve : GTX-IR-FILE001





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* Electrical Characteristics :

GOTREND PN	Inductance (uH)	L-Tolerance	DCR (Ohm) Typ. / Max.	Isat (A) Typ.	Irms (A) Typ.
GNR2512PD-6R8M	6.80	M	0.25 / 0.30	1.15	1.00

■ Inductance test Freq. : 1MHz / 1V

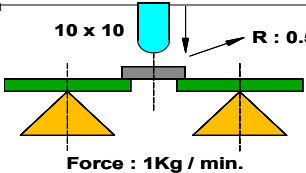
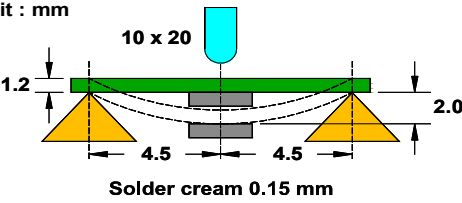
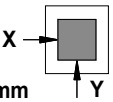
■ L-Tolerance : M = 20%

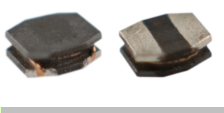
■ The saturation current value (Isat) is the DC current value having inductance decrease down to 30%. (at 20°C)

■ The temperature rise current value (Irms) DC current value having temperature increase up to 40°C. (at 20°C)

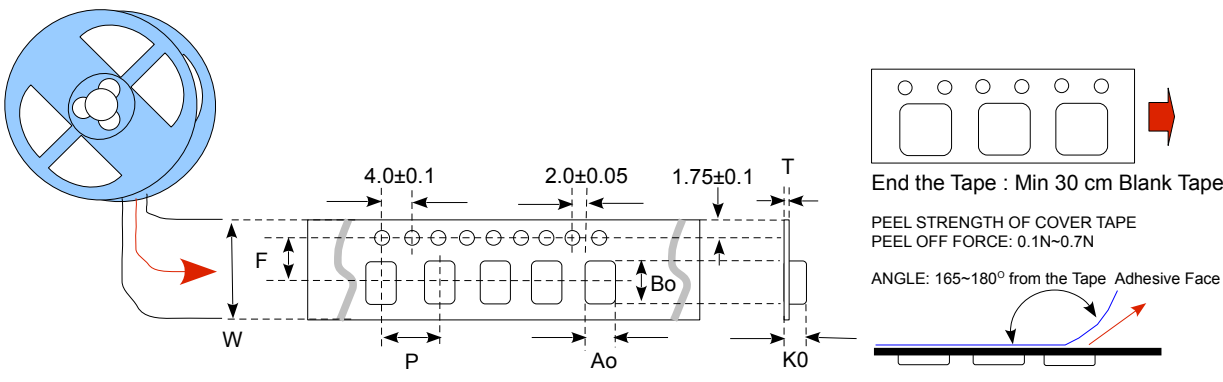
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Reliability :

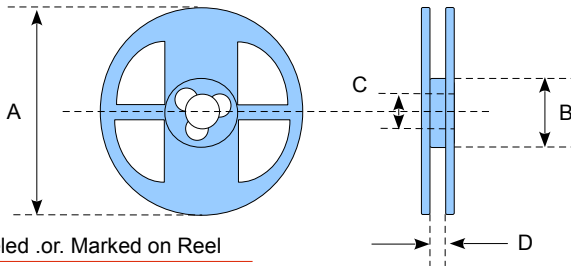
SN	Test Item	Test Condition	Specification	Sample Qty/pcs	Result												
1	Dimension 本體相關尺寸	Actual Size ...	Meet Spec	10	Pass												
2	Thermal Shock (Temperature Cycle) 溫度循環試驗	Temperature:-40 °C / +125 °C kept stabilized for 30 minutes each Cycle: 100 Cycles (power off)	Elec. no variation Appearance no deformation	10	Pass												
3	Humidity Resistance 耐濕試驗	Humidity: 90%~ 95% RH Temperature: 40±2 °C Test Time: 500±12 Hours	Elec. no variation Appearance no deformation	10	Pass												
4	HighTemperature 耐熱試驗	Temperature: 125±2 °C Testing Time: 500±12 Hours	Elec. no variation Appearance no deformation	10	Pass												
5	Low Temperature 耐寒試驗	Temperature: -40 ± 2 °C Time: 500±12 Hours	Elec. no variation Appearance no deformation	10	Pass												
6	Temperature and Humidity Cycle 溫/濕度循環試驗	<table><tr><th>Temperature</th><th>Humidity</th><th>Time</th></tr><tr><td>25 °C</td><td>90%~ 95% RH</td><td>3.0 Hr</td></tr><tr><td>55 °C</td><td>95%~ 96% RH</td><td>5.0 Hr</td></tr><tr><td>25 °C</td><td>90%~ 95% RH</td><td>3.0 Hr</td></tr></table> Cycle: 20 Cycles	Temperature	Humidity	Time	25 °C	90%~ 95% RH	3.0 Hr	55 °C	95%~ 96% RH	5.0 Hr	25 °C	90%~ 95% RH	3.0 Hr	Elec. no variation Appearance no deformation	10	Pass
Temperature	Humidity	Time															
25 °C	90%~ 95% RH	3.0 Hr															
55 °C	95%~ 96% RH	5.0 Hr															
25 °C	90%~ 95% RH	3.0 Hr															
7	Vibration 振動性試驗	Frequency: 10Hz~55Hz Amplitude: 1.5mm Direction: X,Y,Z Time: 2 Hours each	Elec. no variation Appearance no deformation	10	Pass												
8	Solderability 焊錫性試驗	Go through real SMT IR-Reflow.... The profile like our suggest profile. Preheat:160 ± 10 °C (90 sec) Peak:245±5 °C Peak Time: 50 Sec. / up 217 °C	Elec. no variation Appearance no deformation	10	Pass												
9	Soldering Heat Resistance 耐熱 焊性試驗	Preheat:160 ± 10 °C (90 sec) Solder:Sn/Ag/Cu(Pb Free) Solder Temp.: 260 ± 5 °C Time: 3±1 seconds	Elec. no variation Appearance no deformation	10	Pass												
10	Iron Solder Heat Resistance 手焊耐熱試驗	Solder Temp.: 350 ± 5 °C Flux: Rosin Time: 3±1 seconds	Elec. no variation Appearance no deformation	10	Pass												
11	Bending Strength 折斷力試驗	Unit : mm 	Elec. no variation Appearance no deformation	10	Pass												
12	Flexure Strength 彎曲試驗	Unit : mm 	Elec. no variation Appearance no deformation	10	Pass												
13	Terminal Strength 推/ 拉力試驗	 Push 10N force to X , Y direction Mount on PCB Solder Cream 0.15 mm	Must no crack and damage	10	Pass												
14	High-Voltage 高壓電擊試驗	100 V DC between core & winding	Elec. no variation Appearance no deformation	10	Pass												
15	Load life 負載電性試驗	Temperature: 25±3 °C Load: Allowed DC Current Test Time: 96±2 Hours	There Should Be No Evidence Of Short Or Open Circle	10	Pass												

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Package (1) :

							
Size / mm	W	P	A0	B0	K0	T	F
2512	8.0 +/- 0.1	4.0 +/- 0.1	2.35 +/- 0.1	2.90 +/- 0.1	1.4 +/- 0.1	0.23 +/- 0.05	3.5 +/- 0.05

Package (2) :

3 GOTREND Label: Cust Name: PO: PN: Description: Qty: Date: 2   4 Customer Label: PN: Bar Code: PO: Description:etc. 1 Reel Color 7" = White , 13" = Dark Blue 						
Size / mm	A	B	C	D	Reel Size	Qty / Reel
2512	178.0 +/- 2.0	50.0 Min.	13.0 +/- 0.8	8.4 +/- 1.0	7"	2,000

Unit: [cm]

5 Inner Small Box in Outer Large Box

