



Product Series Code	<b>GSSR2</b>	Brand	<b>GOTREND</b>
File Version	<b>GSSR2-V5R0</b>	Editor	<b>Teddy</b>
Established Date	<b>2009.08.27</b>	Description	<b>SMD Power Choke</b>
Latest Edit Date	<b>2016.12.05</b>	Pages	<b>Page : 2</b>

### Features & Application:

- \* Shielding for good in EMI and LowProfile for large current
- \* Fit for power line & signal line circuit
- \* To help you go pass the CE/FCC standard.
- \* Mobil Device / Handheld Device / LowProfile Device / Panel...

### Part No Expression Example:

GSSR2 - 104 P [ ] - 3R8 N  
 1 2 3 4 5 6

1. GOTREND Series : GSSR2
2. Dimension Code : 10 x 10 x 4 mm
3. P = Pb free < 1000 ppm
4. H : H Type = High storage & operating Condition
5. [ L ] Value : 3R8 = 3.8 uH
6. Tolerance : M = 20% , N = 30%

### Test Equipment :

\* HP4284A , HP42841A - L , IDC , RDC

Standard Atmospheric Conditions :

Ambient Temp : 20 +/- 15°C

Relative Humidity : 65 +/- 20%

If there may be any doubt on the result , measurement shall be made within the following limits :

Ambient Temp : 25 +/- 5°C

Relative Humidity : 75 +/- 10%

### Operating & Storage Condition:

OPERATING TEMP : Stand Type : -40~+85°C  
 H Type : -40 ~ +165°C  
 ( range is application specific )

STORAGE TEMP : Stand Type : -40~+85°C  
 H Type : -40 ~ +165°C  
 ( range is application specific )

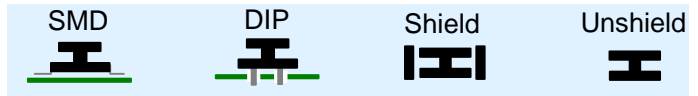
STORAGE LIFE TIME : 12 MONTH @25°C , RH 65%

### Attention & Caution:

Please avoid following matters:

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

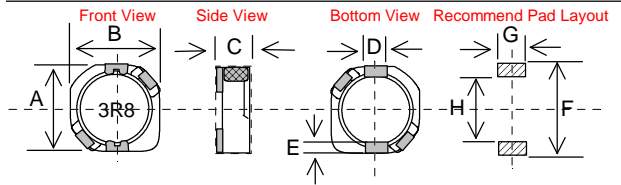
### Product Structure



### 2005 RoHS Compliant - SGS Certified Result

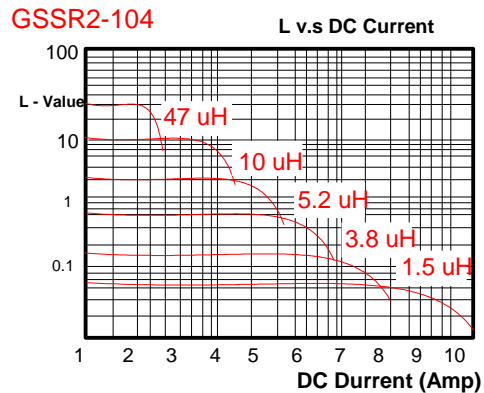
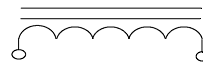
鉛 Pb	鎘 Cd	汞 Hg	六價鉻 Cr+6	溴化聯苯 PBB	溴化聯苯 醌PBDE
<1000ppm	ND	ND	ND	ND	ND

### Dimensions:[mm] MECHANICAL ASSEMBLY & MARKING

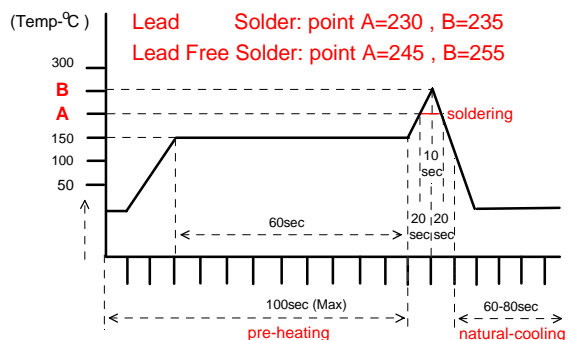


Type	A	B	C	D	E	F	G	H
104	10.2+/-0.5	10.0+/-0.5	3.8+/-0.2	3.0 typ.	1.25 typ.	10.7 ref.	3.8 ref.	7.3 ref.

### SCHEMATIC:



### Recommend Reflow Curve (TIME:Second)



Notice: Iron Soldering: 3 Seconds Max. @260° C



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**Electrical Characteristics :**

PART NO.	Inductance (uH) at 100kHz, 1V	D.C.R (Ω)(Max.) at 20 °C	Rated Current (Amp)(Max.)	
			Condition 1	Condition 2
GSSR2-104P-R33N	0.33	4.2m	12.00	8.50
GSSR2-104P-R68N	0.68	6.0m	11.00	7.50
GSSR2-104P-1R0N	1.00	10.0m	10.00	6.50
GSSR2-104P-1R3N	1.30	8.1m	10.00	6.50
GSSR2-104P-1R5N	1.50	8.1m	10.00	6.10
GSSR2-104P-1R8N	1.80	10.0m	9.20	6.10
GSSR2-104P-2R2N	2.20	10.0m	7.60	6.10
GSSR2-104P-2R5N	2.50	10.5m	7.50	6.10
GSSR2-104P-3R0N	3.00	12.0m	7.50	6.10
GSSR2-104P-3R3M	3.30	13.0m	7.50	6.10
GSSR2-104P-3R8N	3.80	13.0m	6.00	5.50
GSSR2-104P-4R7N	4.70	21.0m	5.70	5.60
GSSR2-104P-5R2N	5.20	22.0m	5.50	5.40
GSSR2-104P-5R6N	5.60	29.0m	5.30	5.00
GSSR2-104P-6R8N	6.80	27.0m	4.80	4.50
GSSR2-104P-7R0N	7.00	27.0m	4.80	4.50
GSSR2-104P-8R2N	8.20	34.0m	4.40	3.80
GSSR2-104P-100N	10.00	35.0m	4.40	3.80
GSSR2-104P-120M	12.00	46.0m	3.70	3.70
GSSR2-104P-150M	15.00	50.0m	3.60	3.10
GSSR2-104P-180M	18.00	70.0m	3.20	2.60
GSSR2-104P-220M	22.00	73.0m	2.90	2.50
GSSR2-104P-270N	27.00	87.0m	2.40	2.30
GSSR2-104P-330M	33.00	93.0m	2.30	2.20
GSSR2-104P-470M	47.00	128.0m	2.10	1.90
GSSR2-104P-680M	68.00	213.0m	1.50	1.42
GSSR2-104P-820M	82.00	265.0m	1.40	1.32
GSSR2-104P-101M	100.00	304.0m	1.35	1.25
GSSR2-104P-151M	150.00	506.0m	1.15	0.85
GSSR2-104P-221M	220.00	756.0m	0.92	0.70
GSSR2-104P-331M	330.00	1.09	0.70	0.52
GSSR2-104P-681M	680.00	2.30	0.45	0.45
GSSR2-104P-821M	820.00	2.60	0.49	0.30

Measuring Freq. ( L ) : at @100KHz / 1Volt

Test Instrument : HP4286A

L (inductance) TOLERANCE : GSSR2-104 Series 0.33~15 uH +/-30%

GSSR2-104 Series 18~330 uH +/-20% and +/-30%

Note :

The rated current indicates the current when the inductance decreases to 65% of initial value or DC current when the temperature of coil is increased by 30 °C. The smaller one is defined as rated current.

Condition 1 : The current when the inductance decreases to 65% of initial value.

Condition 2 : The current when the temperature of coil is increased by 40 °C.

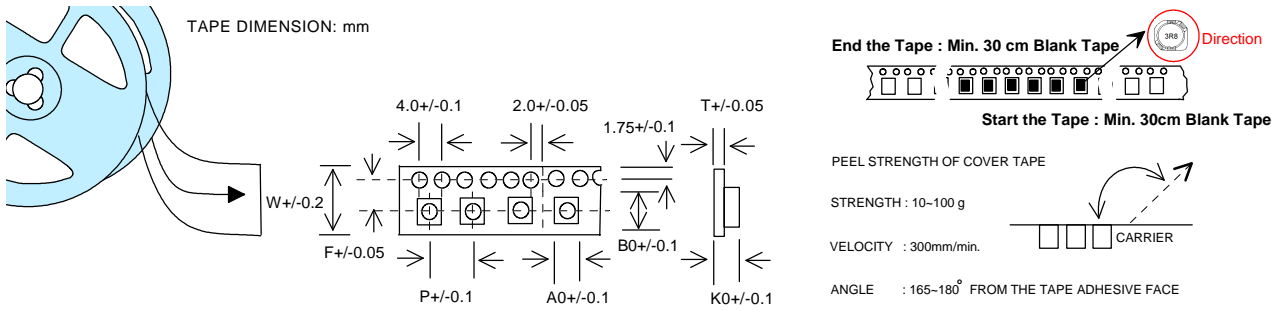


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NO	ITEM	TEST CONDITIONS	Sample Qty/pcs	Spec	Result																
1	Dimension 本體相關呎吋	Actual Size ...	10	Meet Spec	ok																
2	Thermal Shock (Temperature Cycle) 溫度循環試驗	Temperature:-40 ° C/ +165 ° C kept stabilized for 30 minutes each Cycle: 100 Cycles(power off)	10	Elec. no variation Appearance no deformation	ok																
3	Humidity Resistance 耐濕試驗	Humidity: 90%~ 95% RH Temperature: 40± 2 ° C Test Time: 120± 2 Hours	10	Elec. no variation Appearance no deformation	ok																
4	High Temperature 耐熱試驗	Temperature: 165± 2 ° C Humidity: 20% Testing Time: 120± 2 Hours	10	Elec. no variation Appearance no deformation	ok																
5	Low Temperature 耐寒試驗	Temperature: -40 ± 2 ° C Time: 120± 2 Hours	10	Elec. no variation Appearance	ok																
6	Temperature and Humidity Cycle 溫/濕度循環試驗	<table border="1"> <thead> <tr> <th>Step</th> <th>Temp</th> <th>Humidity</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>25± 2 ° C</td> <td>95~100%RH</td> <td>3.0Hr</td> </tr> <tr> <td>2</td> <td>55± 2 ° C</td> <td>95~96%RH</td> <td>9.5Hr</td> </tr> <tr> <td>3</td> <td>25± 2 ° C</td> <td>95~100%RH</td> <td>9.5Hr</td> </tr> </tbody> </table>	Step	Temp	Humidity	Time	1	25± 2 ° C	95~100%RH	3.0Hr	2	55± 2 ° C	95~96%RH	9.5Hr	3	25± 2 ° C	95~100%RH	9.5Hr	10	Elec. no variation Appearance no deformation	ok
Step	Temp	Humidity	Time																		
1	25± 2 ° C	95~100%RH	3.0Hr																		
2	55± 2 ° C	95~96%RH	9.5Hr																		
3	25± 2 ° C	95~100%RH	9.5Hr																		
7	Vibration 振動性試驗	Frequency: 10Hz~55Hz Amplitude: 1.5mm Direction: X,Y,Z Time: 2 Hours each	10	Elec. no variation Appearance no deformation	ok																
8	Dipping Verification 吃錫性試驗	Temp Control Solder @ Temp 230± 5 ° C / 3 Sec 吃錫面積必須 > 75%	10	Elec. no variation Appearance no deformation	ok																
9	IR Reflow Soldering 焊錫性試驗	Go through real SMT IR-Reflow.... Solder Temp.: 230± 5 ° C Time: 90 Sec. Cycles: x 1	10	Elec. no variation Appearance no deformation	ok																
10	Soldering Heat Resistance 耐熱 焊性試驗	Preheat: 120 ~ 150 ° C (6 sec) Solder:H63A(eutectic solder) Solder Temp.: 260 ± 5 ° C Flux: Rosin Dip time: 10± 1 seconds	10	Elec. no variation Appearance no deformation	ok																
11	Bending Strength 折斷力試驗		10	Elec. no variation Appearance no deformation	ok																
11	Flexure Strength 彎曲試驗		10	Elec. no variation Appearance no deformation	ok																
12	Terminal Strength 推/ 拉力試驗		10	After solder between copper plate and terminals of coil, push in two directions Of X,Y with 2.0kg must no crack	ok																
13	High-Voltage 高壓電擊試驗	100 V DC between core & winding	10	Elec. no variation Appearance no deformation	ok																
14	ORT:on going reliability test 負載電氣試驗	Elec loading & spec test... base on Spec for approval	10	Elec. no variation Appearance no deformation	ok																

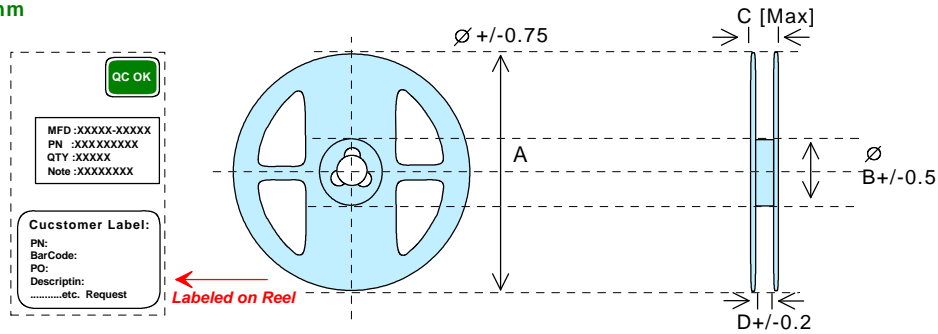


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SIZE/mm	W	P	A <sub>o</sub>	B <sub>o</sub>	K <sub>o</sub>	T	F
<b>104</b>	24.00	16.00	10.70	10.70	4.10	0.35	11.50

**Reel Dimensions: mm**



SIZE / mm	A	B	C	D	REEL SIZE	QTY/REEL
<b>104</b>	330	100	28.9	24.5	13"	0.8K

**BOX Package: Unit: cm**

