

	Product Series Code	GTSD	Brand	GOTREND
	File Version	GTSD-V3R0	Editor	Teddy
	Established Date	2009.09.01	Description	Ferrite Core Shielding SMD Choke
	Latest Edit Date	2010.08.16	Pages	Page : 2

Features & Application:

- * Shielding Choke good in EMI and fit for various application
- * Fit for power line & signal line circuit
- * To help you go pass the CE/FCC standard.
- * Mobile Device / Handheld Device / LowProfile Device / Panel...

Part No Example:

GTSD	32	P	-	222	□	1. GOTREND Series : GTSD
1	2	3	4	5		2. Size Code : 32=3 x 3 x 2 about
						3. P= Pb(Lead) Free < 1000ppm
						4. [L] Value : Inductance
						5. Tolerance: M=+/-20% , N=+/-30%

Custom Design Spec.: @			
P/N	Inductance	RDC (max)	IDC

Test Equipment :

- * HP4284A,HP42841A- L,IDC,Q.RDC
- * HP8753D NETWORK ANALYZER- SRF

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:-40~+105°C

STORAGE TEMP:-40~+105°C

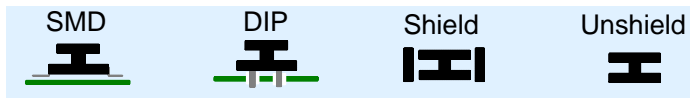
STORAGE LIFE TIME: 12 MONTH @25°C , RH 65%

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.

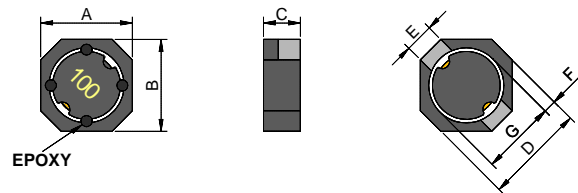
Product Structure



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 醚PBDE
<1000ppm	ND	ND	ND	ND	ND

DIMENSION : [mm] (measured before solder)



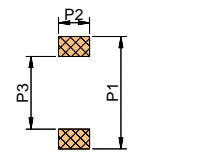
TYPE	A+/-0.3	B+/-0.3	C [max.]	D+/-0.3	E [ref.]	F [ref.]	G [ref.]
GTSD31	3.85	3.85	1.25	3.80	1.60	0.50	3.20
GTSD32	3.85	3.85	1.80	4.10	1.60	0.50	3.20
GTSD33	3.85	3.85	3.00	3.90	1.60	0.50	3.20
GTSD52	5.00	5.00	2.00	5.50	1.60	0.50	4.20
GTSD53	5.00	5.00	3.00	5.50	1.60	0.50	4.20

DIMENSION : [mm]

(Reference for after solder)

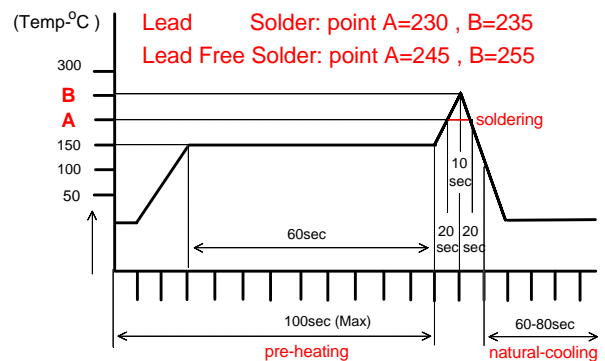
TYPE	A[ref.]	B[ref.]	C[ref.]
GTSD31	3.85	3.85	1.30
GTSD32	3.85	3.85	2.00
GTSD33	3.85	3.85	3.00
GTSD52	5.00	5.00	2.00
GTSD53	5.00	5.00	3.00

Recommend Pad Layout :



TYPE	P1[ref.]	P2[ref.]	P3[ref.]
GTSD31 / 32 / 33	4.90	1.70	2.50
GTSD52 / 53	6.50	1.80	4.20

Recomand Reflow Curve (TIME:Second)



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



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L CODE	L(uH) ± 20% (0.25V)	Test Frequency	DCR (m) (Max)						IDC (Amp) (max)									
			GTSD 31	GTSD 32	GTSD 33	GTSD 33C	GTSD 52	GTSD 53	GTSD 31	GTSD 32	GTSD 33	GTSD 33C	GTSD 52	GTSD 53				
R47□	0.47	100KHz		17				15					1.84				2.33	
1R0□	1.00		60	30	9				24	15	1.60	1.80	1.90				2.27	4.00
1R1□	1.10									20								3.87
1R2□	1.20		65	83	10				44	22	1.40	1.70	1.75				2.15	3.80
1R5□	1.50		77	52	13	15				22	1.24	1.60	1.45	1.90				3.80
1R8□	1.80		93	56		18					1.22	1.55		1.76				
2R0□	2.00				16				46	27			1.25				1.90	2.92
2R2□	2.20		125	58	17				59	29	1.20	1.50	1.15				1.63	2.41
2R4□	2.40		139			22					0.98			1.65				
2R5□	2.50			59	18							1.40	1.05					
2R7□	2.70			60	20	28						1.35	1.00	1.45				
3R3□	3.30		187	64	24	32	62	34	0.89	1.30	0.96	1.44	1.50	2.36				
3R5□	3.50		210	127	25		73		0.85	1.30	0.95		1.34					
3R6□	3.60					35							1.43					
3R9□	3.90		220		33	37			0.78			0.87	1.32					
4R3□	4.30					43							1.00					
4R7□	4.70		240	146	39	45	87	45	0.71	1.10	0.78	0.97	1.14	1.87				
5R1□	5.10					46							0.94					
5R6□	5.60		320	176	44				52	0.62	0.95	0.74					1.60	
6R2□	6.20			220					62		0.91						1.55	
6R8□	6.80	350	238	51	65	105	68	0.57	0.90	0.68	0.87	0.95	1.51					
8R2□	8.20	470	272	65	91	139		0.52	0.80	0.57	0.77	0.90						
100□	10.00	570	299	92	105	150	90	0.47	0.70	0.43	0.70	0.76	1.33					
120□	12.00	750		100	119			0.43		0.38	0.67							
150□	15.00	810	472	113	140	210	142	0.38	0.61	0.33	0.54	0.63	1.05					
180□	18.00	1060		125	175			0.35		0.30	0.50							
220□	22.00	1150	592	146	201	275	208	0.32	0.52	0.28	0.48	0.56	0.86					
270□	27.00	1670	630	176	227			0.29	0.44	0.26	0.40							
330□	33.00	1840	1075	214	287	455	257	0.28	0.43	0.23	0.35	0.44	0.72					
390□	39.00	2310		225	341			0.25		0.21	0.33							
470□	47.00	2630	1309	304	430	730	352	0.22	0.34	0.19	0.32	0.35	0.62					
560□	56.00	2860		324	471			0.20		0.17	0.30							
680□	68.00	3940	2613	472	532	935	525	0.18	0.25	0.16	0.27	0.30	0.51					
820□	82.00	4900	2950	539	675		770	0.16	0.20	0.14	0.23		0.48					
101□	100.00	5740	3255	608	850	1500	801	0.14	0.19	0.13	0.21	0.23	0.43					
121□	120.00	7310		757	1100	1910	850	0.13		0.12	0.20	0.22	0.34					
151□	150.00	9080	3500	882	1230	2680	1100	0.12	0.12	0.11	0.17	0.21	0.26					
181□	180.00	9500		1130	1560	3040	1190	0.11		0.09	0.15	0.20	0.24					
221□	220.00		4900	1269	1800	3520	1530		0.09	0.09	0.14	0.195	0.20					
271□	270.00			1570	2200	4380				0.08	0.13	0.193						
331□	330.00		7280	1930	2640	5560	2030		0.08	0.08	0.12	0.19	0.19					
471□	470.00			2770	3820	7820	3500			0.07	0.10	0.18	0.15					
222□	2200.0		59000				1900		0.035				0.05					

Tolerance: M : 20% , N : 30%

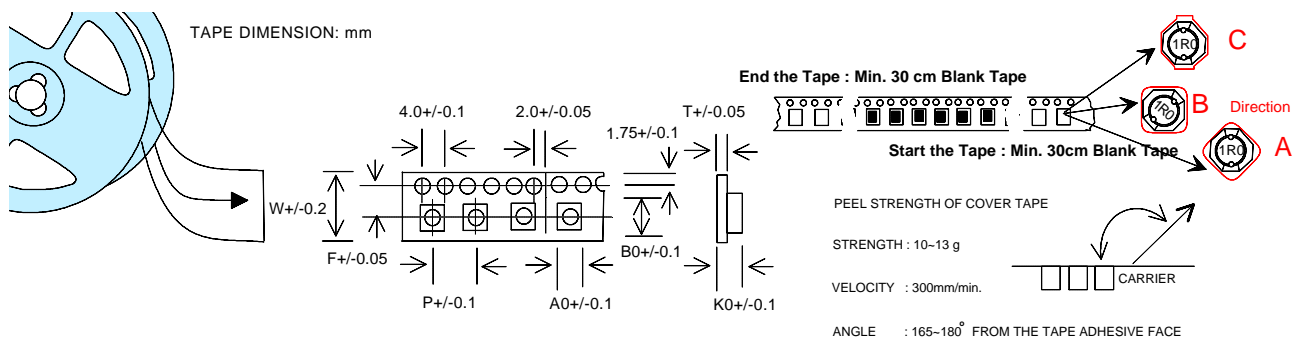


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NO	ITEM	TEST CONDITIONS	Sample Qty/pcs	Spec	Test Day Time	Modify Day	Result																
1	Dimension 本體相關呎吋	Actual Size ...	10	Meet Spec	91/07/12 ~92/06/11	92/06/11	ok																
2	Thermal Shock (Temperature Cycle) 溫度循環試驗	Temperature:-20 °C/ +105 °C kept stabilized for 30 minutes each Cycle: 100 Cycles(power off)	10	Elec. no variation Appearance no deformation	91/07/12 ~92/06/11	92/06/11	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	91/07/12 ~92/06/11	92/06/11	ok																
4	High Temperature 耐熱試驗	Temperature: 105 ± 2 °C Humidity: 20% Testing Time: 120 ± 2 Hours	10	Elec. no variation Appearance no deformation	91/07/12 ~92/06/11	92/06/11	ok																
5	Low Temperature 耐寒試驗	Temperature: -20 ± 2 °C Time: 120 ± 2 Hours	10	Elec. no variation Appearance	91/07/12 ~92/06/11	92/06/11	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	91/07/12 ~92/06/11	92/06/11	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	91/07/12 ~92/06/11	92/06/11	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	91/07/12 ~92/06/11	92/06/11	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	91/07/12 ~92/06/11	92/06/11	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	91/07/12 ~92/06/11	92/06/11	ok																
11	Bending Strength 折斷力試驗		10	Elec. no variation Appearance no deformation	91/07/12 ~92/06/11	92/06/11	ok																
12	Flexure Strength 彎曲試驗		10	Elec. no variation Appearance no deformation	91/07/12 ~92/06/11	92/06/11	ok																
13	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	91/07/12 ~92/06/11	92/06/11	ok																
14	High-Voltage 高壓電擊試驗	100 V DC between core & winding	10	Elec. no variation Appearance no deformation	91/07/12 ~92/06/11	92/06/11	ok																
15	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	91/07/12 ~92/06/11	92/06/11	ok																

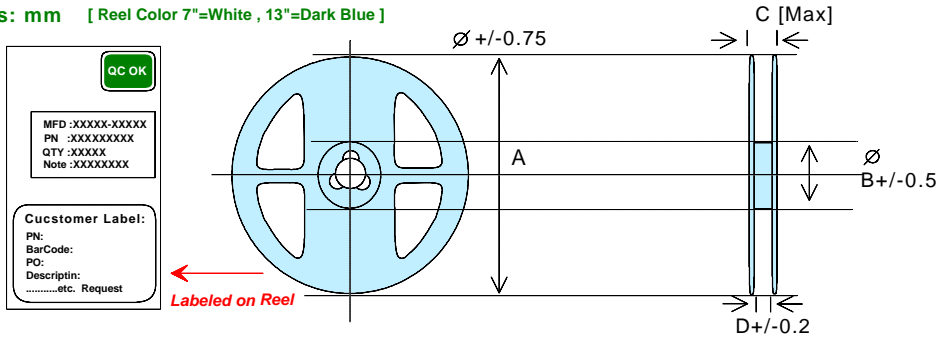


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SIZE/mm	W	P	A _o	B _o	K _o	T	F	Direction
31	12.00	8.00	4.30	4.30	1.40	0.30	5.50	A
32	12.00	8.00	4.15	4.80	1.90	0.30	5.50	C
33	12.00	8.00	4.30	4.30	3.00	0.30	5.50	A
52	12.00	8.00	5.30	5.30	2.05	0.30	5.50	B
53	12.00	8.00	5.30	5.30	3.00	0.30	5.50	B

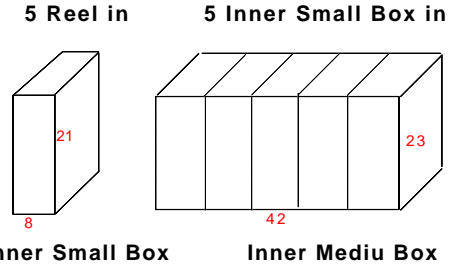
Reel Dimensions: mm [Reel Color 7"=White , 13"=Dark Blue]



SIZE / mm	A	B	C	D	REEL SIZE	QTY/REEL
31	178/330	21+/-0.8	14.7/17.1	13	7"/13"	1K/3.5K
32	178/330	21+/-0.8	14.7/17.1	13	7"/13"	1K/3.5K
33	178/330	21+/-0.8	14.7/17.1	13	7"/13"	0.9K/2.5K
52	178/330	21+/-0.8	14.7/17.1	13	7"/13"	1K/3.5K
53	178/330	21+/-0.8	14.7/17.1	13	7"/13"	0.75K/2.5K

BOX Package: Unit: cm

7" Reel



13" Reel

