



Product Series Code	GSDR	Brand	GOTREND
File Version	GSDR-V7R2	Editor	Teddy
Established Date	2009.07.27	Description	SMD Ferrite DR Core Inductor
Latest Edit Date	2015.03.13	Pages	Page : 2

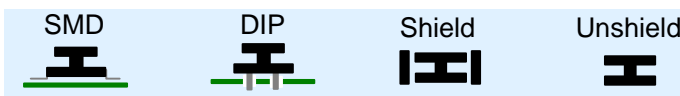
Features & Application :

- * SMD Drum Choke for power line / signal line of various size
- * Low Profile even 3x3x1.4 mm and low cost
- * To help you go pass the CE/FCC standard.
- * Mobil Device / Handheld Device / LowProfile Device / Panel...

Part No Example :

- GSDR 53 P □ - 470 K □
-
- 1 2 3 4 5 6 7
1. GOTREND Series : GSDR
 2. Dimension Code : 5 X 5 X 3 mm
 3. P = Pb < 1000 ppm
 4. Unique Spec :
 - [L] Low Profile
 - [G] 封 EPOXY 膠
 - [H] Wire grade , H = 180°C
 - [M] 封 EMI 膠
 5. L Value , Ex : 470 = 47 uH
 6. Tolerance : K = 10% , M = 20%
 7. S = Customer Design

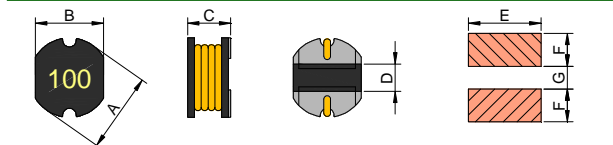
Product Structure :



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

DIMENSION : [mm]



TYPE	A+/-0.3	B+/-0.3	C+/-0.3	D [ref.]	E [ref.]	F [ref.]	G [ref.]
GSDR31L	3.50	3.00	1.40 [max.]	1.20	3.20	1.45	1.00
GSDR31	3.50	3.00	1.60	1.20	3.20	1.45	1.00
GSDR32	3.50	3.00	2.00	1.20	3.20	1.45	1.00
GSDR43	4.50	4.00	3.20	1.20	4.20	1.95	1.00
GSDR52	5.80	5.20	2.50	1.20	5.60	2.60	1.00
GSDR53	5.80	5.20	3.50 [max.]	1.20	5.60	2.60	1.00
GSDR54	5.80	5.20	4.50	1.30	5.60	2.55	1.10
GSDR73	7.80	7.00	3.50	2.10	7.40	3.25	1.70
GSDR75	7.80	7.00	5.00	2.10	7.40	3.25	1.70
GSDR104	10.00+/-0.4	9.00	4.20	2.10	9.60	4.45	1.70
GSDR105	10.00+/-0.4	9.00	5.50	2.50	9.60	4.25	2.10
GSDR107	10.00+/-0.4	9.00	7.50 [max.]	2.10	9.60	4.45	1.70

Test Equipment :

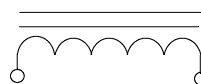
- * HP4284A , HP42841A - L , IDC , Q , RDC
- * HP8753D NETWORK ANALYZER - SRF

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%

Schematic:



Operating & Storage Condition :

OPERATING TEMP : -40 ~ +85°C

STORAGE TEMP : -40 ~ +85°C

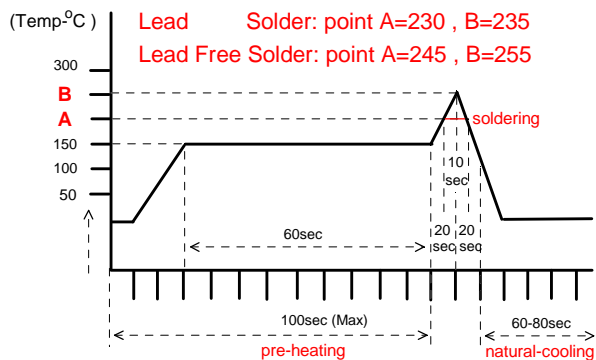
STORAGE LIFE TIME : 12 MONTH @25°C , RH 65%

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.

Recommand Reflow Curve (TIME:Second)

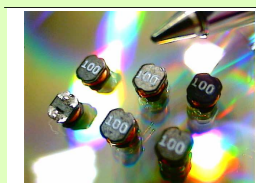




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Established Date	2009.07.27	Description	SMD Ferrite DR Core Inductor
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L CODE	L (uH)	DCR (ohm) (max) / D.C. Current (Amp) (max)													
		GSDR 31		GSDR 31L		GSDR 32		GSDR 43		GSDR 52		GSDR 53		GSDR 54	
R10	0.1					0.020	4.50								
R50	0.5					0.020	4.20	0.011	5.50					7.15m	9.5
R82	0.82									0.040	5.00				
1R0	1.0	0.048	1.60	0.060	1.40	0.035	3.34	0.033	3.80	0.050	4.20	0.030	4.50	0.020	5.00
1R2	1.2					0.044	3.10	0.035	3.60	0.060	4.00	0.030	4.20		
1R4	1.4					0.045	3.01								
1R5	1.5	0.100	1.55			0.045	3.01	0.039	3.20	0.060	3.70	0.030	4.10	0.025	5.00
1R8	1.8					0.054	2.68	0.042	2.91	0.070	3.50	0.030	3.70	0.025	5.00
2R2	2.2	0.078	1.47	0.110	1.05	0.059	2.35	0.047	2.60	0.080	3.20	0.030	3.50	0.027	4.50
2R7	2.7					0.077	2.01	0.052	2.43	0.100	2.70	0.040	3.20	0.030	3.50
3R3	3.3	0.126	1.34	0.150	0.80	0.098	1.83	0.058	2.15	0.120	2.40	0.050	2.80	0.034	3.00
3R6	3.6													0.036	3.00
3R9	3.9	0.140	1.24			0.117	1.64	0.076	1.98	0.140	2.00	0.060	2.60		
4R7	4.7	0.158	1.22	0.210	0.75	0.137	1.50	0.094	1.70	0.150	1.80	0.070	2.50	0.040	3.00
5R6	5.6	0.186	1.09	0.250	0.65	0.157	1.36	0.101	1.60	0.160	1.50	0.080	2.40		
6R8	6.8	0.213	0.96	0.300	0.56	0.196	1.22	0.117	1.41	0.170	1.40	0.090	2.20	0.080	2.50
8R2	8.2	0.238	0.84	0.380	0.50	0.230	1.09	0.132	1.26	0.200	1.30	0.100	2.00	0.068	2.40
100	10	0.307	0.70	0.440	0.45	0.286	0.95	0.182	1.15	0.230	1.10	0.120	1.80	0.100	1.44
120	12	0.372	0.65	0.500	0.43	0.322	0.88	0.210	1.05	0.250	1.05	0.130	1.75	0.120	1.40
150	15	0.466	0.59	0.610	0.39	0.398	0.82	0.235	0.92	0.300	1.00	0.150	1.70	0.140	1.30
180	18	0.515	0.54	0.730	0.32	0.520	0.76	0.338	0.84	0.350	0.90	0.180	1.60	0.150	1.23
220	22	0.656	0.48	0.910	0.28	0.660	0.63	0.378	0.76	0.400	0.85	0.220	1.50	0.180	1.11
270	27	0.774	0.43	1.150	0.26	0.760	0.62	0.522	0.71	0.500	0.75	0.240	1.40	0.200	0.97
330	33	1.021	0.37	1.390	0.25	0.870	0.56	0.540	0.64	0.550	0.70	0.300	1.10	0.230	0.88
390	39	1.122	0.32	1.880	0.23	1.100	0.51	0.587	0.59	0.650	0.60	0.400	1.00	0.320	0.80
470	47	1.509	0.26	2.260	0.21	1.250	0.47	0.844	0.54	0.750	0.55	0.430	0.90	0.370	0.72
560	56	1.675	0.24	2.690	0.20	1.590	0.42	0.937	0.50	0.950	0.50	0.500	0.85	0.420	0.68
680	68	1.919	0.23	3.180	0.18	1.820	0.38	1.117	0.46	1.200	0.45	0.600	0.80	0.460	0.61
820	82	2.644	0.21	3.670	0.16	2.440	0.34	1.180	0.43	1.400	0.40	0.800	0.65	0.600	0.58
101	100	2.870	0.19	4.940	0.14	2.840	0.31	1.190	0.41	1.750	0.35	0.900	0.60	0.700	0.52
121	120	4.084	0.17	5.350	0.12	3.190	0.28	1.220	0.38	2.000	0.25	1.000	0.58	0.930	0.48
151	150	4.774	0.16			4.200	0.16	1.400	0.35	2.600	0.22	1.300	0.43	1.100	0.40
181	180	5.699	0.14			5.110	0.15	1.850	0.31	3.000	0.20	1.500	0.41	1.380	0.38
221	220	9.000	0.12			7.310	0.14	2.156	0.29	3.700	0.18	2.000	0.38	1.570	0.35
271	270					8.240	0.12	2.890	0.26	4.000	0.19	2.500	0.35		
331	330					10.190	0.10	3.760	0.20	4.200	0.20	3.200	0.28	2.200	0.30
391	390							5.500	0.17						
471	470							7.200	0.15			4.200	0.25	2.800	0.23
531	530														
561	560											4.500	0.25	3.000	0.20
681	680													3.500	0.18
821	820														
102	1000	34.000	0.07					11.500	0.08			6.950	0.220	6.240	0.15
122	1200	35.000	0.057												
152	1500														
182	1800														
202	2000											17.500	0.150		
252	2500														
302	3000											27.140	0.120		
532	5300														
103	10000														
153	15000														

- Measuring Freq. : 100KHz , 0.25V / Test Instrument: HP4284A
- L Value Tolerance : <1.0 uH = 30% ; 1.0~8.2uH = 20% ; 10uH~15000uH = 10% / 20%
- D.C. Current : Base on L drop 10% max. & Temp. rise up 40 deg.C max.



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L CODE	L (uH)	DCR (ohm) (max) / D.C. Current (Amp) (max)									
		GSDR 73		GSDR 75		GSDR 104		GSDR 105		GSDR 107	
R10	0.1										
1R0	1.0	0.018	7.00	0.013	7.50	0.012	8.70			0.008	9.50
1R2	1.2			0.015	7.20	0.014	8.00	0.009	8.63		
1R4	1.4					0.016	7.48				
1R5	1.5	0.020	6.00	0.016	6.50	0.016	7.48	0.012	8.00		
1R8	1.8			0.020	6.00	0.018	6.80			0.011	8.60
2R2	2.2	0.023	5.00	0.023	5.30	0.020	5.40	0.016	7.20	0.012	8.00
2R7	2.7					0.024	3.20				
3R3	3.3	0.025	4.00	0.028	4.50	0.028	2.85	0.018	6.50	0.016	6.80
3R9	3.9			0.030	4.20	0.030	2.80			0.017	6.35
4R7	4.7	0.039	3.50	0.045	4.00	0.038	2.75	0.020	5.50	0.019	5.45
5R6	5.6			0.048	3.60	0.040	2.70			0.024	4.30
6R8	6.8	0.040	2.80	0.058	3.20	0.042	2.65	0.040	4.50	0.035	3.52
8R2	8.2			0.070	2.80	0.048	2.60			0.045	3.51
100	10	0.080	1.44	0.070	2.30	0.050	2.38	0.060	2.60	0.060	3.50
120	12	0.090	1.39	0.080	2.00	0.060	2.13	0.070	1.94	0.070	3.40
150	15	0.100	1.24	0.090	1.80	0.070	1.87	0.070	1.72	0.080	3.10
180	18	0.110	1.12	0.100	1.60	0.080	0.73	0.080	1.58	0.090	3.00
220	22	0.130	1.07	0.110	1.50	0.090	1.60	0.080	1.42	0.100	2.60
270	27	0.150	0.94	0.120	1.30	0.100	1.44	0.100	1.32	0.110	2.40
330	33	0.170	0.85	0.130	1.20	0.120	1.26	0.110	1.16	0.120	2.30
390	39	0.220	0.74	0.160	1.10	0.150	1.20	0.120	1.10	0.140	2.10
470	47	0.250	0.68	0.180	1.10	0.170	1.10	0.140	1.00	0.170	1.95
560	56	0.280	0.64	0.240	0.94	0.200	1.01	0.190	0.93	0.190	1.85
680	68	0.330	0.59	0.280	0.85	0.220	0.91	0.210	0.85	0.220	1.65
820	82	0.410	0.54	0.370	0.78	0.250	0.85	0.280	0.79	0.250	1.50
101	100	0.480	0.51	0.430	0.72	0.340	0.74	0.340	0.72	0.350	1.40
121	120	0.540	0.49	0.470	0.66	0.400	0.69	0.370	0.63	0.400	1.30
151	150	0.750	0.40	0.640	0.58	0.540	0.61	0.510	0.55	0.470	1.20
181	180	1.020	0.36	0.710	0.51	0.620	0.56	0.570	0.50	0.630	1.00
221	220	1.200	0.31	0.960	0.49	0.720	0.53	0.780	0.47	0.730	0.95
271	270	1.310	0.29	1.110	0.42	0.950	0.45	0.870	0.41	0.970	0.90
331	330	1.500	0.28	1.260	0.40	1.100	0.42	1.200	0.37	1.150	0.80
391	390			1.770	0.36	1.240	0.38	1.340	0.35	1.300	0.75
471	470			1.960	0.34	1.530	0.35	1.500	0.33	1.480	0.65
531	530									1.700	0.62
561	560					1.900	0.32	1.900	0.33	1.900	0.60
681	680			2.480	0.30			2.250	0.28	2.250	0.50
821	820			3.400	0.30			2.550	0.24	2.550	0.48
102	1000			5.000	0.17					3.000	0.46
122	1200			5.000	0.17					3.500	0.35
152	1500			5.520	0.16						
182	1800			6.050	0.15						
202	2000			7.280	0.14						
252	2500			9.680	0.11						
302	3000			13.200	0.10						
532	5300			24.000	0.08						
103	10000							31.000	0.15		
153	15000									41.000	0.12

■ Measuring Freq. : 100KHz , 0.25V / Test Instrument: HP4284A

■ L Value Tolerance : <1.0 uH = 30% ; 1.0~8.2uH = 20% ; 10uH~15000uH = 10% / 20%

■ D.C. Current : Base on L drop 10% max. & Temp. rise up 40 deg.C max.

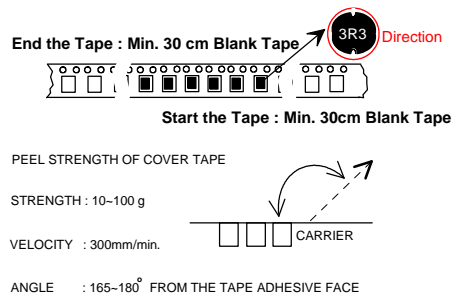
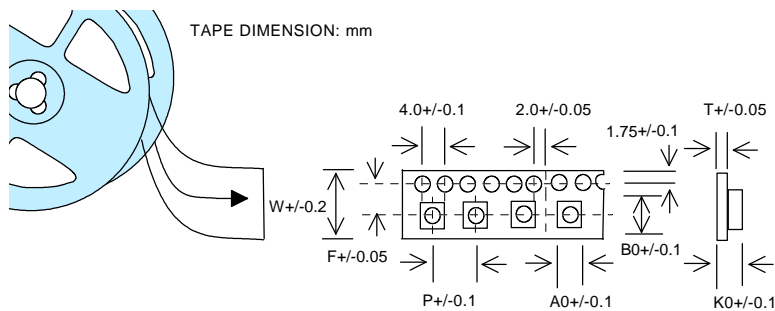


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NO	ITEM	TEST CONDITIONS	Sample Qty/pcs	Spec	Result																
1	Dimension 本體相關呎吋	Actual Size ...	10	Meet Spec	ok																
2	Thermal Shock (Temperature Cycle) 溫度循環試驗	Temperature:-20 ° C/ +85 ° C kept stabilized for 30 minutes each Cycle: 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: 85± 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: -20 ± 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.: 220~250 ° C , Time: 50 Sec. 250 ° C , Time: 10 Sec. Cycles: x 3	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																
12	Flexure Strength 彎曲試驗		10	Elec. no variation Appearance no deformation	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	ok																
14	High-Voltage 高壓電擊試驗	100 V DC between core & winding	10	Elec. no variation Appearance no deformation	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	ok																

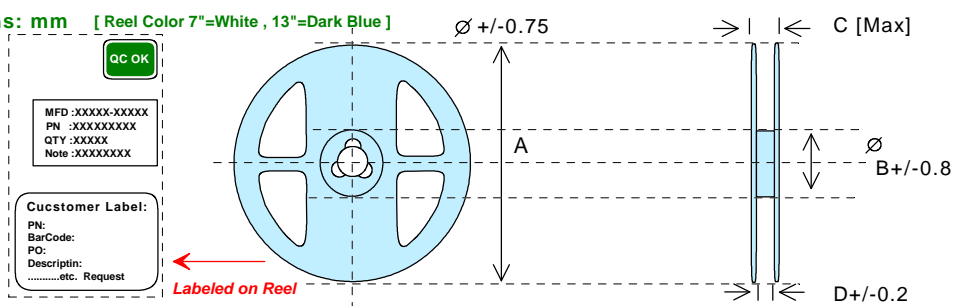


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SIZE/mm	W	P	A ₀	B ₀	K ₀	T	F
31L	12.00	8.00	3.20	3.80	1.60	0.25	5.50
31	12.00	8.00	3.20	3.80	1.80	0.25	5.50
32	12.00	8.00	3.53	3.94	2.40	0.25	5.50
43	12.00	8.00	4.40	5.05	3.60	0.30	5.80
52	12.00	8.00	5.50	6.10	2.80	0.30	5.80
53	12.00	8.00	5.50	6.10	3.50	0.30	5.80
54	12.00	8.00	5.50	6.10	5.00	0.30	5.80
73	16.00	12.00	7.20	8.00	3.80	0.30	7.70
75	16.00	12.00	7.20	8.10	5.50	0.40	7.70
104	24.00	16.00	9.40	10.40	4.50	0.40	11.20
105	24.00	16.00	9.50	10.40	5.80	0.40	11.20
107	24.00	16.00	9.50	10.40	8.90	0.40	11.20

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



SIZE / mm	A	B	C	D	REEL SIZE	QTY/REEL
31L	330	21 +/- 0.8	18.4	12.4	13"	3,000
31	330	21 +/- 0.8	18.4	12.4	13"	3,000
32	330	21 +/- 0.8	16.5	12.4	13"	2,500
43	330	21 +/- 0.8	16.5	14	13"	2,000
52	330	21 +/- 0.8	18.4	14	13"	2,000
53	330	21 +/- 0.8	18.4	14	13"	2,000
54	330	21 +/- 0.8	18.4	14	13"	1,500
73	330	21 +/- 0.8	22.4	18	13"	1,500
75	330	21 +/- 0.8	22.4	18	13"	1,000
104	330	21 +/- 0.8	26.4	22	13"	1,000
105	330	21 +/- 0.8	26.4	22	13"	750
107	330	21 +/- 0.8	31.1	24.5	13"	500

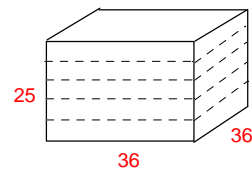
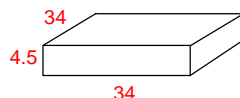
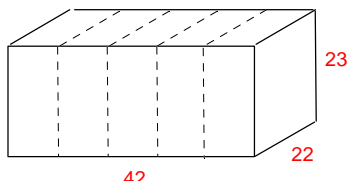
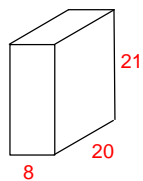
BOX Package: Unit: cm

31/32-4 Reel in

5 Inner Small Box in

104/105-1 Reel in
43/5X/7X-2 Reel in

5 Inner Small Box in



Inner Small Box

Outer Large Box

Inner Small Box

Outer Large Box

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