



Product Series Code	WBD	Brand	MOTTO
File Version	WBD-V2	Editor	Jack
Established Date	2000.05.23	Description	SMD POWER CHOKE CORE WITH SHIELDING
Latest Edit Date	2010.11.26	Pages	Page : 1

Features & Application:

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

Part No Example:

- WBD 4D28 - 100 N
- 1 2 3 4
1. MOTTO Type :WBD
 2. Dimension Code 5.7x5.7x3.0
 3. [L] Value : Inductance 100 = 10 uH
 4. Tolerance : N = 30% , M = 20%

Custom Design Spec : @ 0.56 OHM

P/N	Inductance	RDC (max)	IDC
WBD4D28- 100 N	10uH	0.56 OHM	1.3A

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 : 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)

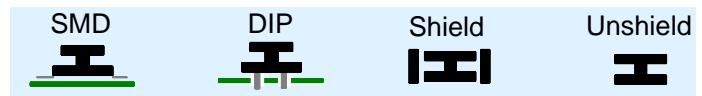
STORAGE LIFE TIME : 12 MONTH @25°C , RH 65%

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.

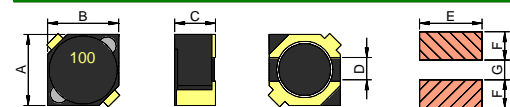
Product Structure



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 醚PBDE
<1000ppm	ND	ND	ND	ND	ND

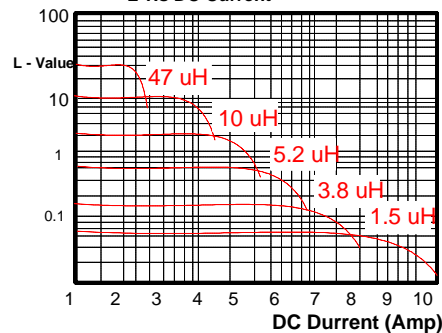
DIMENSION : [mm]



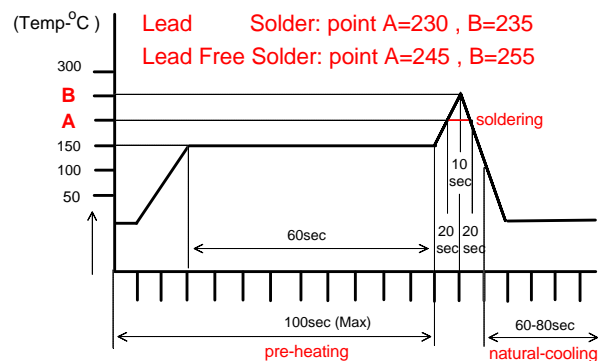
Marking : Stand Type - 100

TYPE	A+/-0.3	B+/-0.3	C [max.]	D+/-0.8	E [ref.]	F [ref.]	G [ref.]
WBD3D16	3.70	3.70	1.80	2.00	4.10	1.25	1.60
WBD4D18	4.70	4.70	2.00	2.00	5.10	1.75	1.60
WBD4D22	4.70	4.70	2.50	2.00	5.10	1.75	1.60
WBD4D28	4.70	4.70	3.00	2.00	5.10	1.75	1.60
WBD5D18	5.70	5.70	2.00	2.00	6.30	2.35	1.60
WBD5D28	5.70	5.70	3.00	2.00	6.30	2.35	1.60
WBD6D18	6.70	6.70	2.00	2.00	7.30	2.85	1.60
WBD6D28	6.70	6.70	3.00	2.00	7.30	2.85	1.60
WBD6D38	6.70	6.70	4.10	2.00	7.30	2.85	1.60
WBD10D38	10.00+/-0.5	10.20+/-0.5	4.00	7.70+/-1.0	11.00	1.95	7.10

WBD10D38 L v.s DC Current



Recommand Reflow Curve (TIME:Second)



Notice: Iron Soldering, Solder < 30 Watt, Direct touch the terminal x 3 Seconds Max. @350°C





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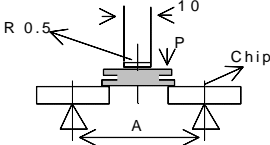
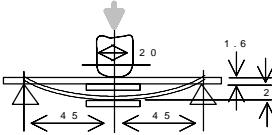
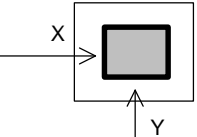
L CODE	L (uH)	D.C.R () (max) / I.D.C(Amp)(max)																			
		WBD 3D16		WBD 4D18		WBD 4D22		WBD 4D28		WBD 5D18		WBD 5D28		WBD 6D18		WBD 6D28		WBD 6D38		WBD 10D38	
1R0	1.0			0.045	1.72	0.038	3.20									0.016	4.10				
1R2	1.2							0.024	2.56									0.014	3.20		
1R5	1.5	0.05	1.55			0.045	2.70									0.018	3.50			8.1m	10.00
1R8	1.8					0.050	2.30	0.028	2.20												
2R2	2.2	0.07	1.20	0.075	1.32	0.053	2.10	0.031	2.04	0.018	2.60	0.018	2.60	0.043	2.60	0.021	3.00				
2R5	2.5											0.018	2.60							11m	7.50
2R7	2.7			0.105	1.28	0.056	2.00	0.043	1.60												
3R0	3.0											0.024	2.40			0.024	3.00				
3R3	3.3	0.08	1.10	0.110	1.04	0.063	1.80	0.049	1.57	0.047	2.07	0.030	2.20	0.056	2.40	0.026	2.70	0.020	3.50		
3R8	3.8																			13m	6.00
3R9	3.9			0.155	0.88	0.071	1.60	0.065	1.44							0.027	2.60	0.023	3.10		
4R1	4.1									0.057	1.95										
4R2	4.2																				
4R7	4.7	0.11	0.90	0.162	0.84	0.077	1.50	0.072	1.32	0.060	1.90	0.036	2.10	0.073	2.10	0.032	2.50	0.024	3.00		
5R0	5.0															0.033	2.40	0.025	2.90		
5R2	5.2																			22m	5.50
5R3	5.3																				
5R4	5.4									0.076	1.60										
5R6	5.6			0.170	0.80	0.083	1.40	0.101	1.17			0.040	1.90								
6R0	6.0															0.035	2.25				
6R2	6.2									0.096	1.40	0.045	1.80					0.027	2.50		
6R8	6.8	0.17	0.73	0.200	0.76	0.094	1.10	0.109	1.12	0.096	1.30			0.099	1.80	0.040	2.10				
7R0	7.0																			27m	4.80
7R3	7.3															0.054	2.10				
7R4	7.4																	0.031	2.30		
8R2	8.2			0.245	0.68	0.105	1.00	0.118	1.04			0.053	1.60								
8R6	8.6															0.058	1.85				
8R7	8.7																	0.034	2.20		
8R9	8.9									0.116	1.25										
100	10.0	0.21	0.55	0.200	0.61	0.112	0.95	0.128	1.00	0.124	1.20	0.065	1.30	0.156	1.50	0.065	1.70	0.038	2.00	35m	4.40
120	12.0			0.210	0.56	0.162	0.80	0.132	0.84	0.153	1.10	0.076	1.20			0.070	1.55	0.053	1.70		
150	15.0	0.29	0.45	0.240	0.50	0.176	0.80	0.149	0.76	0.196	0.97	0.103	1.10	0.244	1.20	0.084	1.40	0.057	1.60	50m	3.60
180	18.0			0.338	0.48	0.192	0.72	0.166	0.72	0.210	0.85	0.110	1.00			0.095	1.32	0.092	1.50		
220	22.0	0.43	0.40	0.397	0.41	0.224	0.70	0.235	0.70	0.290	0.80	0.122	0.90	0.388	0.95	0.128	1.20	0.096	1.30	73m	2.90
270	27.0			0.441	0.35	0.261	0.60	0.261	0.58	0.330	0.75	0.175	0.85			0.142	1.05	0.109	1.20		
330	33.0	0.68	0.32	0.694	0.32	0.372	0.58	0.378	0.56	0.386	0.65	0.189	0.75	0.531	0.82	0.165	0.97	0.124	1.10	93m	2.30
390	39.0			0.709	0.30	0.394	0.52	0.384	0.50	0.520	0.57	0.212	0.70			0.210	0.86	0.138	1.00		
470	47.0	1.00	0.26	0.922	0.28	0.457	0.47	0.587	0.48	0.595	0.54	0.250	0.62	0.775	0.65	0.238	0.80	0.155	0.95	128m	2.10
560	56.0			1.080	0.26	0.514	0.45	0.624	0.41	0.665	0.50	0.305	0.58			0.277	0.73	0.202	0.85		
680	68.0			1.300	0.24	0.686	0.40	0.699	0.35	0.840	0.43	0.355	0.52			0.304	0.65	0.234	0.75	213m	1.50
820	82.0			1.550	0.22	0.802	0.35	0.915	0.32	0.978	0.41	0.463	0.46			0.390	0.60	0.324	0.70		
101	100.0			1.730	0.20	1.162	0.32	1.020	0.29	1.200	0.36	0.520	0.42			0.535	0.54	0.358	0.65	304m	1.35
121	120.0			2.390	0.18	1.298	0.30	1.270	0.27	1.500	0.33	0.560	0.40			0.750	0.51	0.470	0.59		
151	150.0			2.670	0.15	1.423	0.27	1.350	0.24	1.710	0.31	0.680	0.35			0.950	0.47	0.580	0.54	506m	1.15
181	180.0			4.000	0.14			1.540	0.22	2.240	0.28	0.930	0.32			1.200	0.41	0.690	0.49		
221	220.0							1.720	0.20	2.440	0.23	1.150	0.30			1.500	0.37	0.890	0.43	756m	0.92
271	271.0							1.950	0.16	3.380	0.21	1.560	0.27			1.700	0.33	1.290	0.40		
331	330.0							2.660	0.14	4.340	0.18	1.980	0.25			2.150	0.28	1.700	0.37	1.09	0.70
391	390.0							2.830	0.13			2.500	0.22			2.250	0.27	1.750	0.34		
471	470.0					5.000	0.15					2.700	0.20			3.150	0.21	2.200	0.32		
561	660.0											3.120	0.18			3.750	0.20	2.850	0.29		
681	680.0											4.150	0.16			5.150	0.20	3.200	0.25		
821	820.0																	4.050	0.22		
102	1000.0															5.600	0.14	5.700	0.20		

* Measuring Freq.(L) : WBD-3D16/4D18/4D22/4D28/6D18 @100KHz / 0.1V ,WBD5D18/5D28/6D28/6D38 @10KHz / 0.1V, WBD10D38 @100KHz / 1V
 * Test Instrument : HP4286A
 * Tolerance Code : M= ± 20% , N= ±30%





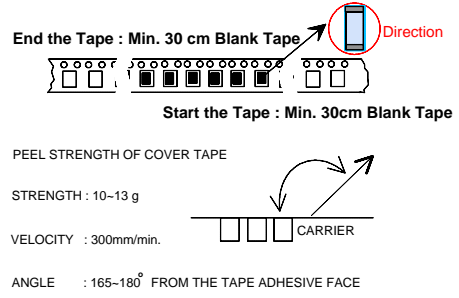
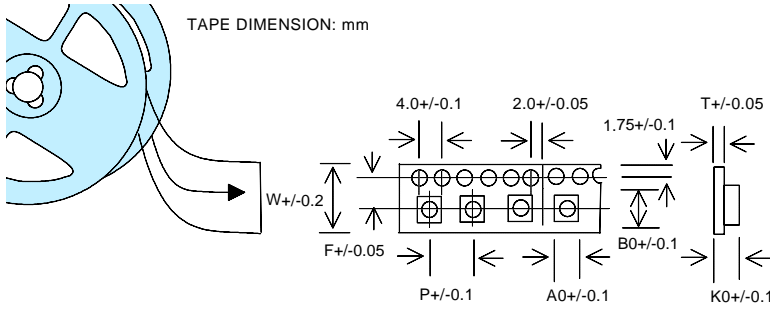
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NO	ITEM	TEST CONDITIONS	Sample Qty/pcs	Spec	Test Day Time	Modify Day	Result
1	Dimension 本體相關呎吋	Actual Size ...	10	Meet Spec	2001/07/12 ~2001/07/18		ok
2	Thermal Shock (Temperature Cycle) 溫度循環試驗	Temperature:-40 ° C/ +165 ° C kept stabilized for 30 minutes each Cycle: 20 Cycles(power off)	10	Elec. no variation Appearance no deformation	2001/07/12 ~ 2001/07/18		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	2001/07/12 ~ 2001/08/18		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	2001/07/12 ~ 2001/08/18		ok
5	Low Temperature 耐寒試驗	Temperature: -40 ± 2 ° C Time: 120 ± 2 Hours	10	Elec. no variation Appearance	2001/07/12 ~ 2001/07/18		ok
6	Temperature and Humidity Cycle 溫/濕度循環試驗	Temperature: 165 ± 2 ° C Humidity: 90%~ 95% RH Time: 24 Hr x 8 Days	10	Elec. no variation Appearance no deformation	2001/07/12 ~ 2001/07/18		ok
7	Vibration 振動性試驗	Frequency: 10~55~10Hz Amplitude: 1.5mm Direction: X,Y,Z Time: 2 Hours each	10	Elec. no variation Appearance no deformation	2001/07/12 ~ 2001/07/16		ok
8	Solderability 吃錫性試驗	Dip pads in Flux and test by Solder Pot (96.5 Sn / 3.5 Ag Solder) @ Temperature 255 ± 5 ° C / 5 +/-1 Sec Soldering Area must be cover > 90%	10	Elec. no variation Appearance no deformation	2001/07/12 ~ 2001/07/12		ok
9	IR Reflow Soldering 迴爐焊性試驗	Go through real SMT IR-Reflow.... Temperature Tolerance : (± 5 ° C); IR temperature curve according to GTX-IR -FILE001 Cycles: x 2	10	Elec. no variation Appearance no deformation	2001/07/12 ~ 2001/07/12		ok
10	Iron Solder Heat Resistance 手焊耐熱試驗	Solder Temp.: 350 ± 5 ° C Flux: Rosin Dip time: 5 ± 1 seconds	10	Elec. no variation Appearance no deformation	2001/07/12 ~ 2001/07/12		ok
11	Bending Strength 折斷力試驗		10	Elec. no variation Appearance no deformation	2001/07/12 ~ 2001/07/12		ok
12	Flexure Strength 彎曲試驗		10	Elec. no variation Appearance no deformation	2001/07/12 ~ 2001/07/12		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 0.5kg must no crack	2001/07/12 ~ 2001/07/12		ok
14	High-Voltage 高壓電擊試驗	100 V DC between core & winding	10	Elec. no variation Appearance no deformation	2001/07/12 ~ 2001/07/12		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	2001/07/12 ~ 2001/07/12		ok



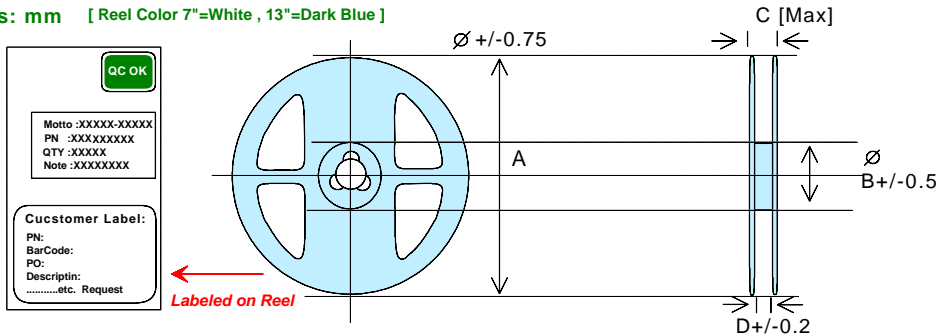


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SIZE/mm	W	P	A ₀	B ₀	K ₀	T	F
32	12.00	8.00	4.10	4.10	2.10	0.35	6.50
42	12.00	8.00	5.10	5.10	2.10	0.30	6.50
425	12.00	8.00	5.10	5.10	3.10	0.30	6.50
43	12.00	8.00	5.10	5.10	3.10	0.30	6.50
52	12.00	8.00	6.10	6.10	2.10	0.30	6.50
53	12.00	8.00	6.10	6.10	3.10	0.30	6.50
62	16.00	12.00	7.20	7.20	2.20	0.30	7.50
63	16.00	12.00	7.60	7.60	3.10	0.35	7.00
64	16.00	12.00	7.60	7.60	4.20	0.35	7.00
104	24.00	16.00	10.30	10.50	4.20	0.35	9.00

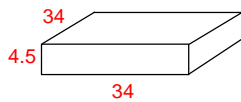
Reel Dimensions: mm [Reel Color 7"=White , 13"=Dark Blue]



SIZE / mm	A	B	C	D	REEL SIZE	QTY/REEL
32	330	100	21	12.3	13"	3K
42	330	100	21	12.3	13"	2K
425	330	100	21	12.3	13"	2K
43	330	100	21	12.3	13"	2K
52	330	100	21	12.3	13"	2K
53	330	100	21	12.3	13"	2K
62	330	100	21	16.3	13"	2K
63	330	100	21	16.3	13"	1K
64	330	100	21	16.3	13"	1K
104	330	100	28	24.3	13"	1K

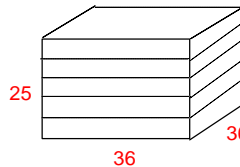
BOX Package: Unit: cm

2 Reel in
104-1 Reel in



Inner Small Box

5 Inner Small Box in



Outer Large Box

