



SPECIFICATION FOR APPROVAL

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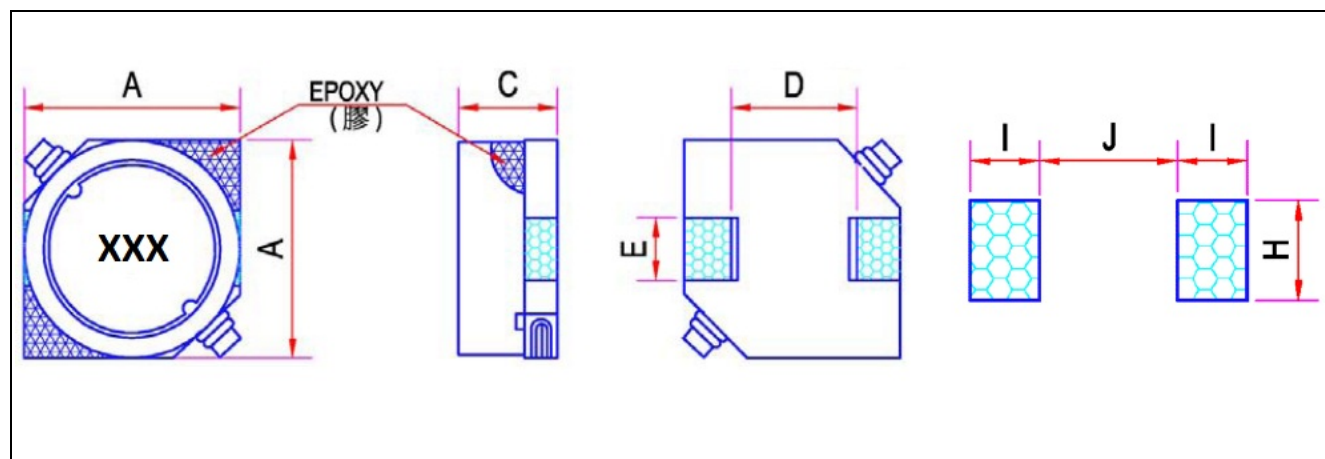
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PRODUCT DETAIL

Electrical Characteristics		Test Instruments	
L	Page 3~4	TEST FREQ: 1KHz TEST LEVEL: 0.5V Operating Temp. -30°C~105°C	<ul style="list-style-type: none"> •L : Agilent 4284A LCR meter. •DCR : Milli-ohm meter •Isat : The current when the inductance becomes 10% (0628 is 30%) lower than its initial value. (Ta=20°C) •Irms : The current when temperature of coil increases up to max $\Delta T=40^{\circ}\text{C}$. (Ta=20°C)
DCR	Page 3~4		
Isat	Page 3~4		
Irms	Page 3~4		

SHAPES AND DIMENSIONS :



Series	Item /Spec.(mm)						
	A max	C max	D	E	H	I	J
SDRS0628	6.2	3.0	3.0	2.0	2.2	2.0	3.0
SDRS0728	7.2	3.0	4.0	2.0	2.2	2.0	4.0
SDRS0730	7.2	3.2	4.0	2.0	2.2	2.0	4.0
SDRS0732	7.2	3.4	4.0	2.0	2.2	2.0	4.0
SDRS0745	7.2	4.8	4.0	2.0	2.2	2.0	4.0
SDRS1045	10.4	4.8	6.0	3.0	3.2	2.5	5.6
SDRS1255	12.8	5.85	8.6	3.0	3.2	2.5	8.6
SDRS1265	12.8	6.85	8.6	3.0	3.2	2.5	8.6
SDRS1275	12.8	7.85	8.6	3.0	3.2	2.5	8.6

Marking : "XXX"



PART NUMBER CODE

SDRS 0628 100 M A
1 2 3 4 5

1. Series Name
2. Size Code : the first two digitals : length(mm), the last two digitals : height(mm)
3. Inductance (R=Decimal Point) Unit : μH
4. Inductance tolerance : "M" \pm 20% ; "N" \pm 30%.
5. Soldering : A=Lead free



SHIELDED SMT POWER INDUCTORS
SDRS 0628/0728/0730/0732/0745/1045 TYPE

Part No.	L (μ H)	DC Resistance (Ω) \pm 20%			Rated DC Current (A) max					
					I sat			I rms		
		0628	0728	0730	0628	0728	0730	0628	0728	0730
3R3MA	3.3		0.037	0.023		1.60	1.80		1.60	1.80
4R7MA	4.7	0.036	0.045	0.036	1.60	1.50	1.60	2.50	1.50	1.60
6R8MA	6.8	0.052	0.059	0.041	1.50	1.30	1.50	2.20	1.30	1.50
100MA	10	0.068	0.083	0.053	1.30	1.10	1.30	1.80	1.10	1.30
150MA	15	0.100	0.130	0.084	1.00	0.88	1.00	1.40	0.88	1.00
220MA	22	0.120	0.180	0.110	0.77	0.75	0.86	1.30	0.75	0.86
330MA	33	0.180	0.240	0.160	0.69	0.65	0.65	1.10	0.65	0.65
470MA	47	0.270	0.340	0.240	0.59	0.54	0.57	0.92	0.54	0.57
680MA	68	0.390		0.310	0.50		0.49	0.78		0.49
101MA	100	0.620		0.450	0.42		0.35	0.64		0.35

Part No.	L (μ H)	DC Resistance (Ω) \pm 20%			Rated DC Current (A) max.					
					I sat			I rms		
		0732	0745	1045	0732	0745	1045	0732	0745	1045
3R3MA	3.3	0.023	0.020		1.90	2.50		1.90	2.30	
4R7MA	4.7	0.036	0.030		1.70	2.00		1.70	2.10	
6R8MA	6.8	0.041	0.039		1.60	1.70		1.60	1.74	
100MA	10	0.053	0.036	0.036	1.40	1.30	3.00	1.40	1.78	2.50
150MA	15	0.075	0.052	0.047	1.10	1.10	2.40	1.10	1.53	2.20
220MA	22	0.110	0.061	0.059	0.96	0.90	2.10	0.96	1.34	1.90
330MA	33	0.160	0.096	0.082	0.75	0.82	1.60	0.75	1.09	1.70
470MA	47	0.240	0.125	0.100	0.67	0.75	1.40	0.67	0.92	1.50
680MA	68	0.310	0.175	0.140	0.59	0.60	1.20	0.59	0.77	1.30
101MA	100	0.450	0.250	0.200	0.45	0.50	1.00	0.45	0.65	1.10
151MA	150	0.650	0.340	0.350	0.37	0.40	0.79	0.37	0.55	0.81
221MA	220	1.050	0.520	0.470	0.29	0.33	0.65	0.29	0.45	0.70
331MA	330	1.670	0.740	0.680	0.22	0.25	0.54	0.22	0.37	0.58
471MA	470	2.050	1.050	1.030	0.20	0.22	0.47	0.20	0.31	0.47
681MA	680	3.150	1.480	1.600	0.16	0.20	0.38	0.16	0.27	0.38
102MA	1000	4.780	2.280	2.800	0.13	0.14	0.32	0.13	0.25	0.29
152MA	1500			3.400			0.22			0.26



SHIELDED SMT POWER INDUCTORS

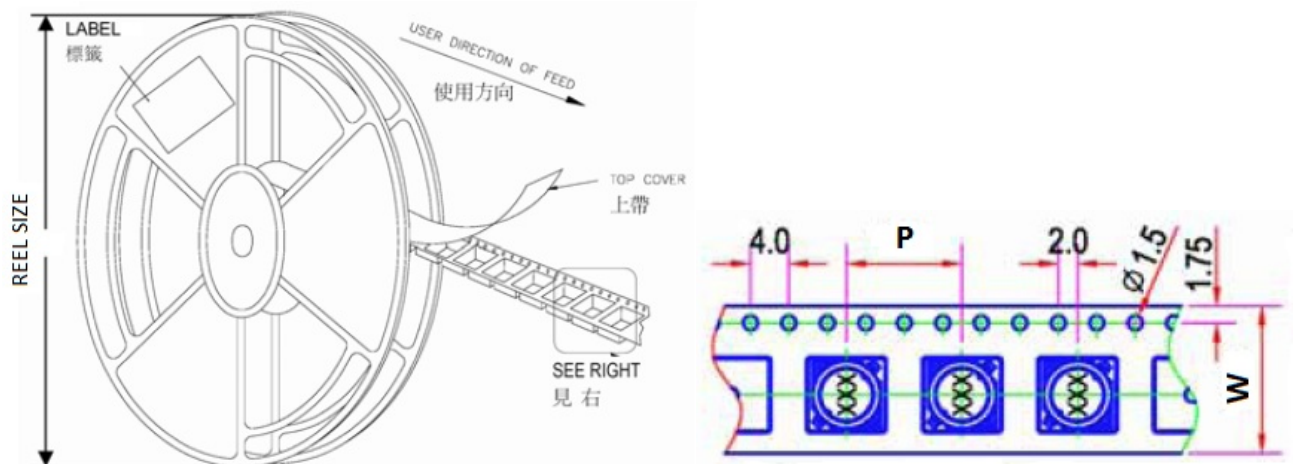
SDRS 1255/1265/1275 TYPE

Part No.	L (μ H)	DC Resistance (Ω) \pm 20%			Rated DC Current (A) max					
					I sat			I rms		
		1255	1265	1275	1255	1265	1275	1255	1265	1275
1R2NA	1.2			6.9			13.0			8.2
2R0NA	2.0		11.7			10.0			6.2	
2R7NA	2.7			9.4			10.0			7.0
3R9NA	3.9			10.4			9.0			6.7
4R2NA	4.2		15.0			7.3			5.5	
5R6NA	5.6			11.6			7.8			6.3
6R0NA	6.0	16.4			3.60			4.9		
6R8NA	6.8			13.1			7.2			5.9
7R0MA	7.0		17.7			5.7			5.0	
100MA	10	21.5	20.2	15.6	3.40	5.0	5.5	4.3	4.8	5.4
150MA	15	25.9	23.7	23.0	2.80	4.2	4.7	3.9	4.4	5.0
220MA	22	33.8	31.6	26.3	2.30	3.5	4.0	3.4	3.8	4.0
330MA	33	41.5	40.6	39.5	1.90	2.8	3.2	3.1	3.4	3.4
470MA	47	61.8	57.8	52.8	1.60	2.4	2.7	2.5	2.8	3.0
680MA	68	83.2	78.7	77.8	1.30	2.0	2.0	2.2	2.4	2.4
101MA	100	117.0	123.0	125.0	1.10	1.6	1.9	1.8	1.9	1.9
151MA	150	190.0	273.0	175.0	0.88	1.0	1.5	1.4	1.2	1.6
221MA	220	270.0		258.0	0.72		1.3	1.2		1.3
331MA	330	410.0			0.59			1.0		
471MA	470	520.0			0.49			0.88		
681MA	680	760.0			0.43			0.73		
102MA	1000	1120			0.34			0.6		
152MA	1500	1730			0.29			0.48		



REEL DIMENSIONS

Unit: mm



REEL PACKAGING QUANTITY

Series	W	P	REEL SIZE	PCS / REEL
SDRS0628	12	8	330 mm (13")	2000
SDRS0728	16	12	330 mm (13")	1000
SDRS0730	16	12	330 mm (13")	1000
SDRS0732	16	12	330 mm (13")	1000
SDRS0745	16	12	330 mm (13")	1000
SDRS1045	24	16	330 mm (13")	750
SDRS1255	24	16	330 mm (13")	500
SDRS1265	24	16	330 mm (13")	500
SDRS1275	24	16	330 mm (13")	350

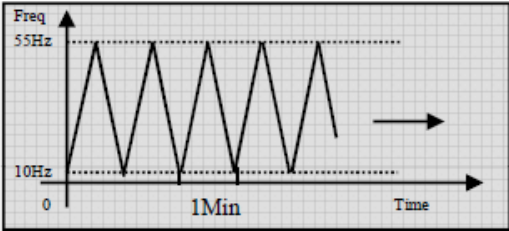
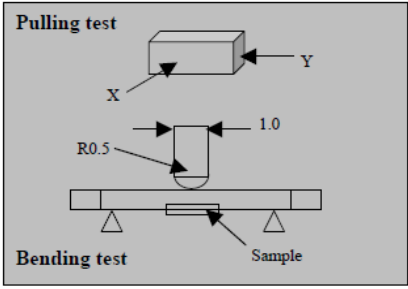


RELIABILITY AND TEST CONDITION

Environmental tests conditions

Item (項目)	Required Characteristics (要求)	Test Method/Condition (測試方法)
<p>High temperature Storage test</p> <p>Reference documents: MIL-STD-202G Method 108A</p> <p>高溫儲存試驗</p>	<p>1.No case deformation or change in appearance. 2.$\Delta L/L \leq 10\%$ or 15% 3.$\Delta DCR/DCR \leq 10\%$</p> <p>N : The High temperature, depend on the spec. N : 高溫設定，依據產品規格設定</p> <p>1.無明顯的外觀缺陷 2.感值變化不超過 10% 或者 15% 3.直流電阻變化不超過 10%</p>	<p>Temperature: $N \pm 2^\circ\text{C}$ Time : 96 ± 2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature.</p> <p>溫度: $N \pm 2^\circ\text{C}$, 時間: 96 ± 2, 小時 樣品在室溫下放置 1 小時, 不超過 2 小時間必須測試。</p>
<p>Low temperature Storage test</p> <p>Reference documents: IEC 68-2-1A 6.1 6.2</p> <p>低溫儲存試驗</p>	<p>1.No case deformation or change in appearance. 2.$\Delta L/L \leq 10\%$ or 15% 3.$\Delta DCR/DCR \leq 10\%$</p> <p>M : The Low temperature, depend on the spec. M : 低溫設定，依據產品規格設定</p> <p>1.無明顯的外觀缺陷 2.感值變化不超過 10% 或者 15% 3.直流電阻變化不超過 10%</p>	<p>Temperature: $M \pm 2^\circ\text{C}$ Time : 96 ± 2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature.</p> <p>溫度: $M \pm 2^\circ\text{C}$, 時間: 96 ± 2, 小時 樣品在室溫下放置 1 小時, 不超過 2 小時間必須測試。</p>
<p>Humidity test Reference</p> <p>documents: MIL-STD-202G Method 103B</p> <p>濕度測試</p>	<p>1.No case deformation or change in appearance. 2.$\Delta L/L \leq 10\%$ or 15% 3.$\Delta DCR/DCR \leq 10\%$</p> <p>1.無明顯的外觀缺陷 2.感值變化不超過 10% 或者 15% 3.直流電阻變化不超過 10%</p>	<p>Temperature: $40 \pm 2^\circ\text{C}$, Humidity: $93 \pm 3\% \text{RH}$ Time : 96 ± 2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature.</p> <p>溫度: $40 \pm 2^\circ\text{C}$, 濕度: $93 \pm 3\% \text{RH}$ 時間 : 96 ± 2 hours 樣品在室溫下放置 1 小時, 不超過 2 小時間必須測試。</p>
<p>Thermal shock test</p> <p>Reference documents: MIL-STD-202G Method 107G</p> <p>熱衝擊測試</p>	<p>1.No case deformation or change in appearance. 2.$\Delta L/L \leq 10\%$ or 15% 3.$\Delta DCR/DCR \leq 10\%$</p> <p>N : The High temperature, depend on the spec. M : The Low temperature, depend on the spec.</p> <p>For T: weight $\leq 28\text{g}$: 15Min; $28\text{g} \leq \text{weight} \leq 136\text{g}$: 30Min</p> <p>1.無明顯的外觀缺陷 2.感值變化小於 10% 3.直流電阻變化小於 10%</p>	<p>First $M^\circ\text{C}$ for T time, next $N^\circ\text{C}$ for T time as 1 cycle. Go through 20 cycles.</p> <p>從 $M^\circ\text{C}$ 作用 T 分鐘, 然後溫度衝擊到 $N^\circ\text{C}$ 作用 T 分鐘, 作為一個循環, 共作用 20 次。</p>

Physical characteristic tests conditions

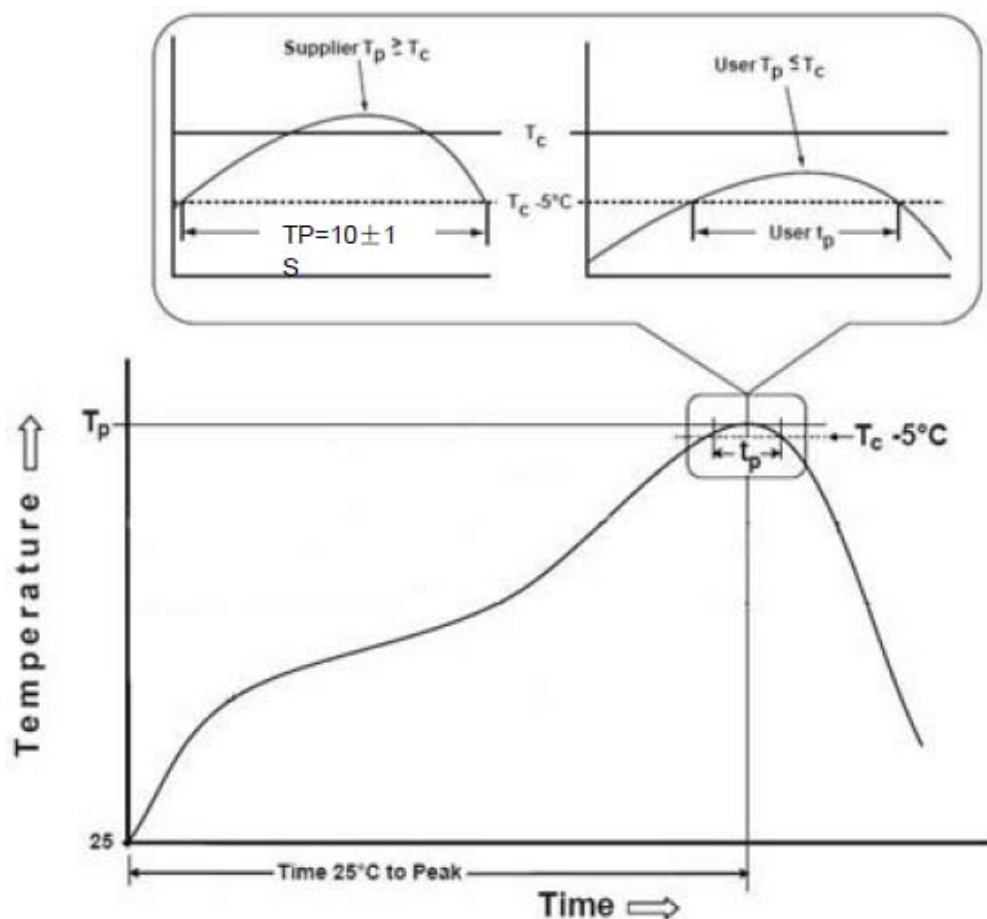
Item (項目)	Required Characteristics (要求)	Test Method/Condition (測試方法)
Solderability test Reference documents: MIL-STD-202G Method 208H IPC J-STD-002B 可焊性測試	Terminals area must have 95% min. Solder coverage 端子必須有 95%以上著錫	<ul style="list-style-type: none"> ● Dip pads in flux then dip in solder pot at 245±5°C for 5 second. ● Solder: lead free ● Flux: rosin flux ● 端子侵入著焊劑，然後侵入 245±5°C 錫爐中 5 秒 ● 焊料：無鉛焊料 ● 助焊劑：松香助焊劑
Heat endurance of Reflow soldering Reference documents: IPC J-STD-020D 過再流焊測試	<ul style="list-style-type: none"> ● No case deformation or change in appearance. ● $\Delta L/L \leq 10\%$ or 15% ● $\Delta DCR/DCR \leq 10\%$ ● 無明顯的外觀缺陷 ● 感值變化不超過 10% 或者 15% ● 直流電阻變化不超過 10% 	<ul style="list-style-type: none"> ● Refer to the next page reflow curve Go through 3 times ● The peak temperature : 260+0/-5°C ● 參照下頁回流焊曲線過三次 ● 峰值溫度為: 260+0/-5°C
Vibration test Reference documents: MIL-STD-202G Method 201A 振動測試	1.No case deformation or change in appearance. 2.No short and no open. 1.無明顯的外觀缺陷 2.無短路開路異常	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.(total 6 hours)  用 10~55Hz 振動頻率 1.5mm 振幅沿 X,Y,Z 方向各振動 2 小時.(共 6 小時)
Drop test Reference documents: MIL-STD-202G Method 203C 落下試驗	1.No case deformation or change in appearance. 2.No short and no open. 1.無明顯的外觀缺陷 2.無短路開路異常	Packaged & Drop down from 1m with 981m/s ² (100G) attitude In 1 angle 1 ridges & 2 surfaces orientations. 將產品包裝後從 1 米高度自然落下至試驗板上 1 角 3 稜 6 面各跌落兩次
Terminal strength push test Reference documents: JIS C 5321:1997 端子強度試驗	Pulling test: DEFINE: A: sectional area of terminal 0.5mm ² <A ≤ 1.2mm ² ; force >2kgf ; time : 10sec 1.2mm ² <A ; force >4kgf ; time: 10sec Bending test: Soldering the products on PCB, after the pulling test and bending test ,terminal should not pull off 推力測試 定義: A: 焊接端子截面積 0.5mm ² <A ≤ 1.2mm ² ; 推力 >2kgf ; 時間: 10sec 1.2mm ² <A ; 推力 >4kgf ; 時間: 10sec 彎折測試： 將產品焊於 PCB 上,分別經過推力測試和彎折測試後,端子不會發生松脫	Bend the testing PCB at middle point, the deflection shall be 2mm  將 PCB 對中彎折,到達撓度 2mm
Resistance to solvent test Reference documents: IEC 68-2-45:1993 耐溶劑性試驗	No case deformation or change in appearance, or obliteration of marking 無外觀破壞及標記破損	To dip parts into IPA solvent for 5±0.5Min, then drying them at room temp for 5Min,at last ,to brushing making 10 times. 在 IPA 溶劑中浸泡 5±0.5 分鐘,室溫下乾燥 5 分鐘,然後擦試 10 次。



RELIABILITY TEST CONDITIONS WIRE WOUND CHIP INDUCTORS TYPE

Item (項目)	Required Characteristics(要求)	Test Method / Condition (測試方法)
Electronic characteristic test of major products 主要產品電特性測試	Refer to catalogue of specific products 參照具體產品目錄頁	Refer to catalogue of specific products 參照具體產品目錄頁書
Overload test Reference documents: JIS C5311-6.13 過負荷試驗	<ul style="list-style-type: none"> ● No case deformation or change in appearance. ● $\Delta L/L \leq 10\%$ ● $\Delta DCR/DCR \leq 10\%$ ● 無明顯的外觀缺陷 ● 感值變化不超過 10% ● 直流電阻變化不超過 10% 	Apply twice as rated current for 5 minutes. 通兩倍額定電流 5 分鐘

Curve of Heat endurance of Reflow soldering test



A test is made under the conditions mentioned above. And it is left 1 hour in the normal temperature and humidity. After that, no mechanical and electrical defeat should be found out.

The reflow condition is according to the machine used by our company.