

■贴片功率电感器

SMD power inductor

◆特征

Feature

- * 高性能
High performance.
- * 磁罩屏蔽结构
Magnetic adhesive shielding structure.
- * 高可靠性
High reliability.
- * 高绝缘能力
High insulation capacity.
- * 符合 RoHS
Compliance with RoHS.
- * 工作温度范围: $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$ (包含自身发热)
Operating Temperature Range, Including self-heating temperature rise: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$.

◆应用

Application

- *手机、DC/DC 转换、AV 设备、OA 设备、家电、信息服务等电子设备。
Electronic devices such as mobile phones, DC/DC converters, AV equipment, OA equipment, household appliances, and information services.

◆型号表示法

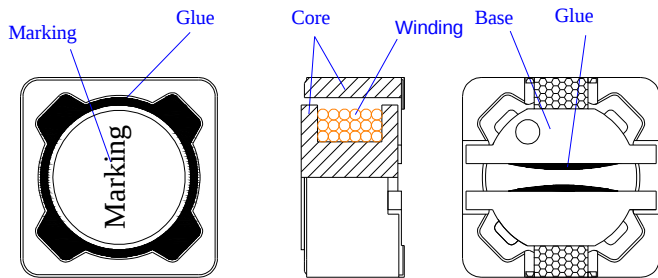
Part Number

MS	127	-	1R0	M	T	***
①	②		③	④	⑤	⑥

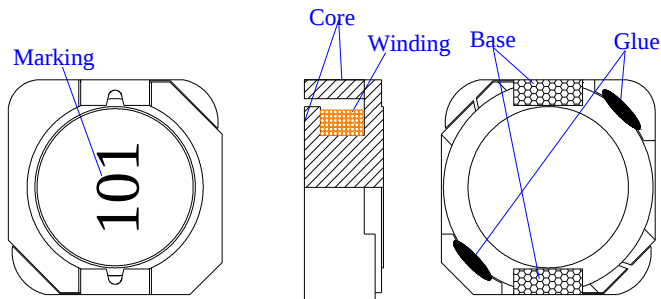
① 产品代号 Product Code		② 尺寸代码 Dimensions code				③ 电感量标称值 Inductance		④ 电感量公差代码 Tolerance code	
MS	MS 系列贴片功率电感器 MS Series SMD Power Inductor	73	7.3*7.3*3.4mm	124	12.2*12.2*4.5mm	1R0	1.0uH	M	±20%
		74	7.3*7.3*4.2 mm	125	12.2*12.2*5.7mm	100	10uH	N	±30%
		103R	10.2*10.0*3.1 mm	127	12.2*12.2*7.5mm	101	100uH		
		104R	10.2*10.0*4.0mm	129	12.2*12.2*10.0mm				
		105R	10.2*10.0*5.1mm						
⑤ 包装方式 Packaging		⑥ 内部代码 Internal code							
T	卷带盘装 Tape & Reel	***	内部代码 Internal code						

◆产品结构
Product Structure

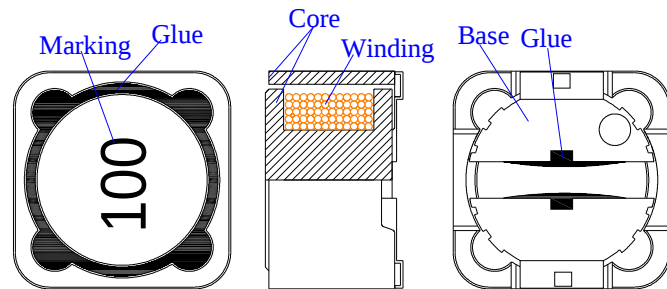
MS73、MS74 series



MS103R、MS104R、MS105R series



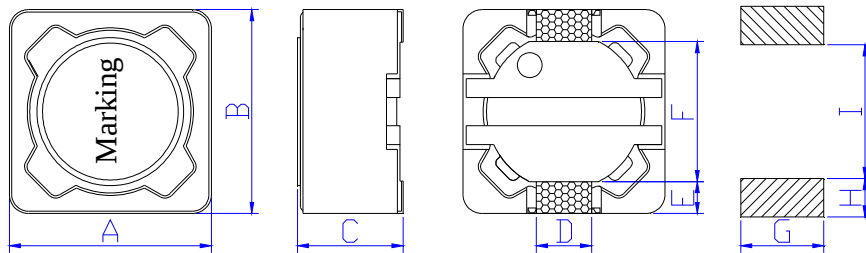
MS124、MS125、MS127、MS129 series



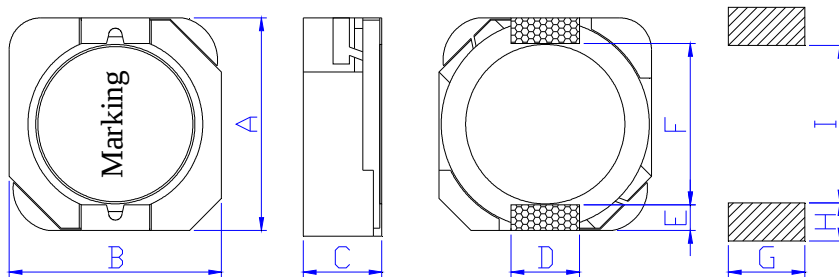
No.	部位 Component	材料 Material
①	磁芯 Core	镍锌铁氧体 DR/RI 磁芯 Ni-Zn ferrite DR/RI core
②	线圈 Winding	漆包线 Enamelled wire
③	电极片 Base	Phosphor bronze
④	粘结剂 Glue	环氧树脂 Epoxy
⑤	印字 Marking	油墨 INK

◆规格尺寸
Dimension

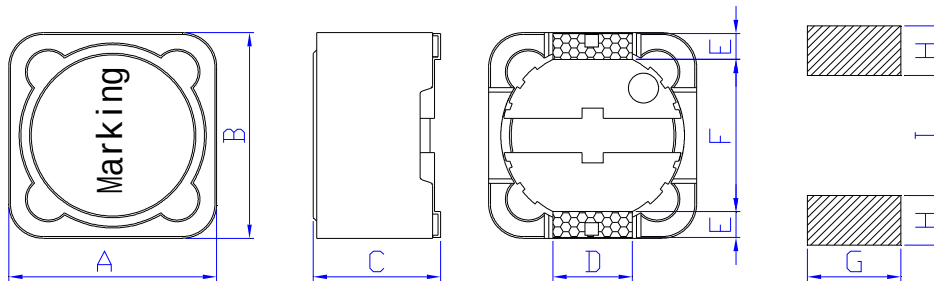
MS73、MS74 series


RECOMMENDED
LAND PATTERNS

MS103R、MS104R、MS105R series


RECOMMENDED
LAND PATTERNS

MS124、MS125、MS127、MS129 series


RECOMMENDED
LAND PATTERNS

Part No	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)
73	7.30±0.30	7.30±0.30	3.70 Max	2.00 typ.	1.10 typ.	5.00 typ.	2.20 typ.	1.60 typ.	4.80 typ.
74	7.30±0.30	7.30±0.30	4.50 Max	2.00 typ.	1.10 typ.	5.00 typ.	2.20 typ.	1.60 typ.	4.80 typ.
103R	10.20±0.30	10.00±0.30	3.10 Max	3.00 typ.	1.20 typ.	7.80 typ.	3.20 typ.	1.60 typ.	7.30 typ.
104R	10.20±0.30	10.00±0.30	4.00 Max	3.00 typ.	1.20 typ.	7.80 typ.	3.20 typ.	1.60 typ.	7.30 typ.
105R	10.20±0.30	10.00±0.30	5.10 Max	3.00 typ.	1.20 typ.	7.80 typ.	3.20 typ.	1.60 typ.	7.30 typ.
124	12.20±0.40	12.20±0.40	4.80 Max	5.00 typ.	2.20 typ.	7.60 typ.	5.40 typ.	2.80 typ.	7.00 typ.
125	12.20±0.40	12.20±0.40	6.00 Max	5.00 typ.	2.20 typ.	7.60 typ.	5.40 typ.	2.80 typ.	7.00 typ.
127	12.20±0.40	12.20±0.40	7.80 Max	5.00 typ.	2.20 typ.	7.60 typ.	5.40 typ.	2.80 typ.	7.00 typ.
129	12.20±0.40	12.20±0.40	10.00 Max	5.00 typ.	2.20 typ.	7.60 typ.	5.40 typ.	2.80 typ.	7.00 typ.

◆电性能参数

Electrical Characteristics

MS73 Series

型号 Part NO	电感量 Ls (μH)		直流电阻 RDC (Ω)		额定电流 IDC (A)	印字 Marking
	Nominal value	Tol.			Max.	
MS73-R70NT	0.70	±30%	0.012	Max	5.50	R70
MS73-R90NT	0.90	±30%	0.016	Max	4.00	R90
MS73-1R0NT	1.00	±30%	0.025	Max	3.60	1R0
MS73-1R5NT	1.50	±30%	0.028	Max	3.00	1R5
MS73-1R8NT	1.80	±30%	0.030	Max	2.75	1R8
MS73-2R2NT	2.20	±30%	0.035	Max	2.50	2R2
MS73-3R3NT	3.30	±30%	0.038	Max	2.00	3R3
MS73-4R7NT	4.70	±30%	0.040	Max	1.82	4R7
MS73-5R6NT	5.60	±30%	0.057	Max	1.82	5R6
MS73-6R8NT	6.80	±30%	0.058	Max	1.70	6R8
MS73-100_T	10.00	N: ±30% M: ±20%	0.072	Max	1.68	100
MS73-120_T	12.00		0.098	Max	1.52	120
MS73-150_T	15.00		0.130	Max	1.33	150
MS73-180_T	18.00		0.140	Max	1.20	180
MS73-220_T	22.00		0.190	Max	1.07	220
MS73-330_T	33.00		0.240	Max	0.91	330
MS73-390_T	39.00		0.320	Max	0.77	390
MS73-470_T	47.00		0.360	Max	0.76	470
MS73-560_T	56.00		0.470	Max	0.68	560
MS73-680_T	68.00		0.520	Max	0.61	680
MS73-820_T	82.00		0.690	Max	0.57	820
MS73-101_T	100.00		0.790	Max	0.50	101
MS73-121_T	120.00		0.890	Max	0.49	121
MS73-151_T	150.00		1.270	Max	0.43	151
MS73-181_T	180.00		1.450	Max	0.39	181
MS73-221_T	220.00		1.650	Max	0.35	221
MS73-271_T	270.00		2.310	Max	0.32	271
MS73-331_T	330.00		2.620	Max	0.28	331
MS73-391_T	390.00		2.940	Max	0.26	391
MS73-471_T	470.00		4.180	Max	0.24	471
MS73-561_T	560.00		4.670	Max	0.22	561
MS73-681_T	680.00		5.730	Max	0.19	681
MS73-821_T	820.00		6.540	Max	0.18	821
MS73-102_T	1000.00		9.440	Max	0.16	102

IDC: 指使电感量比初始值下降 20%或电感器表面温度上升 40℃的电流值 (参考周围环境温度 20℃)。

The rated DC current is that which cause a 20% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃).

额定工作使用电压: DC30V

Rated working voltage: DC30V

项目 Item	测试条件 Test condition	测试仪器 Test equipment
电感量 Ls	1kHz/500mV	HP4263B\IM3532-50 or equivalent
直流电阻 RDC	直流电 direct-current	HP4263B\IRM3545 or equivalent
额定电流 IDC	1kHz/500mV	Microtest 6379 & 6220 or equivalent

MS74 series

型号 Part NO	电感量 Ls (μH)		直流电阻 RDC (Ω)		额定电流 IDC (A)	印字 Marking
	Nominal value	Tol.			Max.	
MS74-1R0NT	1.00	±30%	0.022	Max	6.00	1R0
MS74-1R5NT	1.50	±30%	0.028	Max	3.20	1R5
MS74-2R2NT	2.20	±30%	0.030	Max	3.00	2R2
MS74-3R3NT	3.30	±30%	0.035	Max	2.80	3R3
MS74-4R7NT	4.70	±30%	0.040	Max	2.50	4R7
MS74-6R8NT	6.80	±30%	0.050	Max	2.10	6R8
MS74-8R2NT	8.20	±30%	0.060	Max	2.00	8R2
MS74-100_T	10.00	N: ±30% M: ±20%	0.055	Max	1.84	100
MS74-120_T	12.00		0.058	Max	1.71	120
MS74-150_T	15.00		0.081	Max	1.47	150
MS74-180_T	18.00		0.091	Max	1.31	180
MS74-220_T	22.00		0.110	Max	1.23	220
MS74-270_T	27.00		0.150	Max	1.10	270
MS74-330_T	33.00		0.170	Max	0.96	330
MS74-390_T	39.00		0.230	Max	0.91	390
MS74-470_T	47.00		0.260	Max	0.88	470
MS74-560_T	56.00		0.350	Max	0.75	560
MS74-680_T	68.00		0.380	Max	0.69	680
MS74-820_T	82.00		0.430	Max	0.61	820
MS74-101_T	100.00		0.610	Max	0.60	101
MS74-121_T	120.00		0.660	Max	0.52	121
MS74-151_T	150.00		0.880	Max	0.46	151
MS74-181_T	180.00		0.980	Max	0.42	181
MS74-221_T	220.00		1.170	Max	0.36	221
MS74-271_T	270.00		1.640	Max	0.34	271
MS74-331_T	330.00		1.860	Max	0.32	331
MS74-391_T	390.00		2.850	Max	0.29	391
MS74-471_T	470.00		3.010	Max	0.26	471
MS74-561_T	560.00		3.620	Max	0.23	561
MS74-681_T	680.00		4.630	Max	0.22	681
MS74-821_T	820.00		5.200	Max	0.20	821
MS74-102_T	1000.00		6.000	Max	0.18	102
MS74-152_T	1500.00		8.800	Max	0.16	152
MS74-182_T	1800.00		10.000	Max	0.15	182

IDC: 指使电感量比初始值下降 20%或电感器表面温度上升 40℃的电流值 (参考周围环境温度 20℃)。

The rated DC current is that which cause a 20% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃).

额定工作使用电压: DC30V

Rated working voltage: DC30V

项目 Item	测试条件 Test condition	测试仪器 Test equipment
电感量 Ls	1kHz/500mV	HP4263B\IM3532-50 or equivalent
直流电阻 RDC	直流电 direct-current	HP4263B\IRM3545 or equivalent
额定电流 IDC	1kHz/500mV	Microtest 6379 & 6220 or equivalent

MS103R series

型号 Part NO	电感量 Ls (μH)		直流电阻 RDC (Ω)		额定电流 IDC (A)	印字 Marking
	Nominal value	Tol.			Max.	
MS103R-1R5NT	1.50	±30%	0.018	Max	7.00	1R5
MS103R-2R2NT	2.20	±30%	0.023	Max	6.50	2R2
MS103R-3R3NT	3.30	±30%	0.028	Max	6.00	3R3
MS103R-4R7NT	4.70	±30%	0.047	Max	5.50	4R7
MS103R-5R6NT	5.60	±30%	0.055	Max	4.80	5R6
MS103R-6R8NT	6.80	±30%	0.058	Max	3.84	6R8
MS103R-8R2NT	8.20	±30%	0.072	Max	4.50	8R2
MS103R-100_T	10.00	N:±30% M:±20%	0.097	Max	3.18	100
MS103R-150_T	15.00		0.122	Max	2.80	150
MS103R-220_T	22.00		0.143	Max	2.40	220
MS103R-330_T	33.00		0.230	Max	2.20	330
MS103R-470_T	47.00		0.341	Max	1.90	470
MS103R-560_T	56.00		0.371	Max	1.70	560
MS103R-680_T	68.00		0.511	Max	1.50	680
MS103R-820_T	82.00		0.541	Max	1.30	820
MS103R-101_T	100.00		0.803	Max	1.10	101
MS103R-151_T	150.00		1.260	Max	0.92	151
MS103R-221_T	220.00		1.760	Max	0.75	221

IDC: 指使电感量比初始值下降 35%或电感器表面温度上升 40℃的电流值（参考周围环境温度 20℃）。

The rated DC current is that which cause a 35% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃).

额定工作使用电压: DC30V

Rated working voltage: DC30V

项目 Item	测试条件 Test condition	测试仪器 Test equipment
电感量 Ls	100kHz/500mV	HP4263B\IM3532-50 or equivalent
直流电阻 RDC	直流电 direct-current	HP4263B\IRM3545 or equivalent
额定电流 IDC	100kHz/500mV	Microtest 6379 & 6220 or equivalent

MS104R series

型号 Part NO	电感量 Ls (μH)		直流电阻 RDC (Ω)		额定电流 IDC (A)	印字 Marking
	Nominal value	Tol.			Max.	
MS104R-1R0NT	1.00	±30%	0.014	Max	10.00	1R0
MS104R-1R5NT	1.50	±30%	0.017	Max	10.00	1R5
MS104R-2R2NT	2.20	±30%	0.021	Max	7.50	2R2
MS104R-3R3NT	3.30	±30%	0.025	Max	6.00	3R3
MS104R-3R8NT	3.80	±30%	0.025	Max	6.00	3R8
MS104R-4R7NT	4.70	±30%	0.028	Max	5.50	4R7
MS104R-5R6NT	5.60	±30%	0.031	Max	5.20	5R6
MS104R-6R8NT	6.80	±30%	0.038	Max	4.80	6R8
MS104R-8R2NT	8.20	±30%	0.042	Max	4.60	8R2
MS104R-100_T	10.00	N: ±30% M: ±20%	0.043	Max	4.40	100
MS104R-120_T	12.00		0.060	Max	4.00	120
MS104R-150_T	15.00		0.068	Max	3.60	150
MS104R-180_T	18.00		0.070	Max	3.30	180
MS104R-220_T	22.00		0.090	Max	2.90	220
MS104R-270_T	27.00		0.117	Max	2.60	270
MS104R-330_T	33.00		0.120	Max	2.40	330
MS104R-390_T	39.00		0.150	Max	2.20	390
MS104R-470_T	47.00		0.190	Max	2.10	470
MS104R-560_T	56.00		0.297	Max	1.80	560
MS104R-680_T	68.00		0.350	Max	1.50	680
MS104R-820_T	82.00		0.385	Max	1.45	820
MS104R-101_T	100.00		0.430	Max	1.35	101
MS104R-121_T	120.00		0.470	Max	1.25	121
MS104R-151_T	150.00		0.506	Max	1.15	151
MS104R-181_T	180.00		0.627	Max	1.00	181
MS104R-221_T	220.00		0.756	Max	0.92	221
MS104R-271_T	270.00		0.950	Max	0.75	271
MS104R-331_T	330.00		1.090	Max	0.70	331
MS104R-471_T	470.00		1.900	Max	0.60	471
MS104R-561_T	560.00		2.100	Max	0.57	561
MS104R-681_T	680.00		2.200	Max	0.55	681
MS104R-821_T	820.00		4.600	Max	0.32	821
MS104R-102_T	1000.00		5.110	Max	0.32	102

IDC: 指使电感量比初始值下降 35%或电感器表面温度上升 40℃的电流值（参考周围环境温度 20℃）。

The rated DC current is that which cause a 35% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃).

额定工作使用电压: DC30V

Rated working voltage: DC30V

项目 Item	测试条件 Test condition	测试仪器 Test equipment
电感量 Ls	100kHz/500mV	HP4263B\IM3532-50 or equivalent
直流电阻 RDC	直流电 direct-current	HP4263B\IRM3545 or equivalent
额定电流 IDC	100kHz/500mV	Microtest 6379 & 6220 or equivalent

MS105R series

型号 Part NO	电感量 Ls (μH)		直流电阻 RDC (Ω)		额定电流 IDC (A)	印字 Marking
	Nominal value	Tol.			Max.	
MS105R-1R0NT	1.00	±30%	0.013	Max	11.00	1R0
MS105R-1R5NT	1.50	±30%	0.011	Max	10.50	1R5
MS105R-2R2NT	2.20	±30%	0.013	Max	9.25	2R2
MS105R-3R3NT	3.30	±30%	0.017	Max	7.80	3R3
MS105R-4R7NT	4.70	±30%	0.019	Max	6.40	4R7
MS105R-5R6NT	5.60	±30%	0.022	Max	5.90	5R6
MS105R-6R8NT	6.80	±30%	0.025	Max	5.40	6R8
MS105R-8R2NT	8.20	±30%	0.029	Max	4.85	8R2
MS105R-100_T	10.00	N: ±30% M: ±20%	0.046	Max	4.50	100
MS105R-150_T	15.00		0.049	Max	3.60	150
MS105R-220_T	22.00		0.061	Max	2.80	220
MS105R-330_T	33.00		0.084	Max	2.30	330
MS105R-470_T	47.00		0.130	Max	2.00	470
MS105R-560_T	56.00		0.149	Max	1.90	560
MS105R-680_T	68.00		0.201	Max	1.65	680
MS105R-820_T	82.00		0.227	Max	1.50	820
MS105R-101_T	100.00		0.253	Max	1.35	101
MS105R-121_T	120.00		0.303	Max	1.28	121
MS105R-151_T	150.00		0.370	Max	1.12	151
MS105R-181_T	180.00		0.419	Max	1.04	181
MS105R-221_T	220.00		0.500	Max	0.94	221
MS105R-331_T	330.00		0.700	Max	0.80	331
MS105R-391_T	390.00		0.800	Max	0.75	391
MS105R-471_T	470.00		1.290	Max	0.60	471
MS105R-561_T	560.00		1.430	Max	0.54	561
MS105R-681_T	680.00		1.600	Max	0.52	681
MS105R-821_T	820.00		1.770	Max	0.50	821
MS105R-102_T	1000.00		1.990	Max	0.48	102
MS105R-122_T	1200.00		2.600	Max	0.42	122
MS105R-152_T	1500.00		3.050	Max	0.40	152
MS105R-222_T	2200.00		5.110	Max	0.30	222
MS105R-332_T	3300.00		6.000	Max	0.25	332
MS105R-472_T	4700.00		7.500	Max	0.20	472

IDC: 指使电感量比初始值下降 35%或电感器表面温度上升 40℃的电流值（参考周围环境温度 20℃）。

The rated DC current is that which cause a 35% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃).

额定工作使用电压: DC30V

Rated working voltage: DC30V

项目 Item	测试条件 Test condition	测试仪器 Test equipment
电感量 Ls	100kHz/500mV	HP4263B\IM3532-50 or equivalent
直流电阻 RDC	直流电 direct-current	HP4263B\IRM3545 or equivalent
额定电流 IDC	100kHz/500mV	Microtest 6379 & 6220 or equivalent

MS124 series

型号 Part NO	电感量 Ls (μH)		直流电阻 RDC (Ω)		额定电流 IDC (A)	印字 Marking
	Nominal value	Tol.			Max.	
MS124-1R0NT	1.00	±30%	0.008	Max	12.00	1R0
MS124-1R6NT	1.60	±30%	0.009	Max	8.00	1R6
MS124-2R2NT	2.20	±30%	0.014	Max	7.50	2R2
MS124-3R3NT	3.30	±30%	0.015	Max	6.80	3R3
MS124-3R9NT	3.90	±30%	0.018	Max	6.50	3R9
MS124-4R7NT	4.70	±30%	0.022	Max	5.70	4R7
MS124-6R8NT	6.80	±30%	0.028	Max	4.90	6R8
MS124-100_T	10.00	N: ±30% M: ±20%	0.035	Max	4.50	100
MS124-120_T	12.00		0.038	Max	4.00	120
MS124-150_T	15.00		0.050	Max	3.20	150
MS124-180_T	18.00		0.057	Max	3.10	180
MS124-220_T	22.00		0.066	Max	2.90	220
MS124-270_T	27.00		0.080	Max	2.80	270
MS124-330_T	33.00		0.097	Max	2.70	330
MS124-390_T	39.00		0.132	Max	2.10	390
MS124-470_T	47.00		0.150	Max	1.90	470
MS124-560_T	56.00		0.190	Max	1.80	560
MS124-680_T	68.00		0.220	Max	1.50	680
MS124-820_T	82.00		0.260	Max	1.30	820
MS124-101_T	100.00		0.308	Max	1.20	101
MS124-121_T	120.00		0.380	Max	1.10	121
MS124-151_T	150.00		0.530	Max	0.95	151
MS124-181_T	180.00		0.620	Max	0.85	181
MS124-221_T	220.00		0.700	Max	0.80	221
MS124-271_T	270.00		0.876	Max	0.60	271
MS124-331_T	330.00		0.990	Max	0.50	331
MS124-471_T	470.00		1.300	Max	0.40	471
MS124-152_T	1500.00		4.000	Max	0.29	152

IDC: 指使电感量比初始值下降 20%或电感器表面温度上升 40℃的电流值 (参考周围环境温度 20℃)。

The rated DC current is that which cause a 20% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃).

额定工作使用电压: DC30V

Rated working voltage: DC30V

项目 Item	测试条件 Test condition	测试仪器 Test equipment
电感量 Ls	100kHz/500mV	HP4263B\IM3532-50 or equivalent
直流电阻 RDC	直流电 direct-current	HP4263B\IRM3545 or equivalent
额定电流 IDC	100kHz/500mV	Microtest 6379 & 6220 or equivalent

型号 Part NO	电感量 Ls (μH)		直流电阻 RDC (Ω)		额定电流 IDC (A)	印字 Marking
	Nominal value	Tol.			Max.	
MS125-1R3NT	1.30	±30%	0.012	Max	8.00	1R3
MS125-2R2NT	2.20	±30%	0.014	Max	7.00	2R2
MS125-3R1NT	3.10	±30%	0.017	Max	6.00	3R1
MS125-3R9NT	3.90	±30%	0.018	Max	5.50	3R9
MS125-4R7NT	4.70	±30%	0.020	Max	5.00	4R7
MS125-5R8NT	5.80	±30%	0.021	Max	4.40	5R8
MS125-6R8NT	6.80	±30%	0.022	Max	3.00	6R8
MS125-8R2NT	8.20	±30%	0.025	Max	4.00	8R2
MS125-100_T	10.00	N: ±30% M: ±20%	0.025	Max	4.00	100
MS125-120_T	12.00		0.027	Max	3.50	120
MS125-150_T	15.00		0.030	Max	3.30	150
MS125-180_T	18.00		0.034	Max	3.00	180
MS125-220_T	22.00		0.042	Max	2.80	220
MS125-270_T	27.00		0.051	Max	2.30	270
MS125-330_T	33.00		0.065	Max	2.10	330
MS125-390_T	39.00		0.068	Max	2.00	390
MS125-470_T	47.00		0.075	Max	1.80	470
MS125-560_T	56.00		0.110	Max	1.70	560
MS125-680_T	68.00		0.120	Max	1.50	680
MS125-820_T	82.00		0.140	Max	1.40	820
MS125-101_T	100.00		0.198	Max	1.30	101
MS125-121_T	120.00		0.220	Max	1.10	121
MS125-151_T	150.00		0.230	Max	1.00	151
MS125-181_T	180.00		0.290	Max	0.90	181
MS125-221_T	220.00		0.400	Max	0.80	221
MS125-271_T	270.00		0.460	Max	0.75	271
MS125-331_T	330.00		0.510	Max	0.68	331
MS125-391_T	390.00		0.690	Max	0.65	391
MS125-471_T	470.00		0.770	Max	0.58	471
MS125-561_T	560.00		0.860	Max	0.54	561
MS125-681_T	680.00		1.200	Max	0.48	681
MS125-821_T	820.00		1.340	Max	0.43	821
MS125-102_T	1000.00		1.900	Max	0.40	102
MS125-472_T	4700.00		8.280	Max	0.30	472
MS125-802_T	8000.00		15.000	Max	0.22	802
MS125-103_T	10000.00		20.000	Max	0.12	103

IDC: 指使电感量比初始值下降 20%或电感器表面温度上升 40℃的电流值 (参考周围环境温度 20℃)。

The rated DC current is that which cause a 20% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃).

额定工作使用电压: DC30V

Rated working voltage: DC30V

项目 Item	测试条件 Test condition	测试仪器 Test equipment
电感量 Ls	<10μH 7.96MHz/500mV ≥10μH 1kHz/500mV	HP4263B\IM3532-50 or equivalent
直流电阻 RDC	直流电 direct-current	HP4263B\IRM3545 or equivalent
额定电流 IDC	<10μH 7.96MHz/500mV ≥10μH 1kHz/500mV	Microtest 6379 & 6220 or equivalent

MS127 series

型号 Part NO	电感量 Ls (μH)		直流电阻 RDC (Ω)		额定电流 IDC (A)	印字 Marking
	Nominal value	Tol.			Max.	
MS127-1R0NT	1.00	±30%	0.0070	Max	9.80	1R0
MS127-1R5NT	1.50	±30%	0.0100	Max	9.00	1R5
MS127-2R2NT	2.20	±30%	0.0115	Max	7.50	2R2
MS127-3R3NT	3.30	±30%	0.0135	Max	7.50	3R3
MS127-4R7NT	4.70	±30%	0.0158	Max	6.80	4R7
MS127-5R6NT	5.60	±30%	0.0176	Max	6.70	5R6
MS127-6R8NT	6.80	±30%	0.0200	Max	6.60	6R8
MS127-8R2NT	8.20	±30%	0.0200	Max	5.90	8R2
MS127-100_T	10.00	N: ±30% M: ±20%	0.0216	Max	5.40	100
MS127-120_T	12.00		0.0243	Max	4.90	120
MS127-150_T	15.00		0.0270	Max	4.50	150
MS127-180_T	18.00		0.0392	Max	3.90	180
MS127-220_T	22.00		0.0432	Max	3.60	220
MS127-270_T	27.00		0.0459	Max	3.40	270
MS127-330_T	33.00		0.0648	Max	3.00	330
MS127-390_T	39.00		0.0729	Max	2.75	390
MS127-470_T	47.00		0.1000	Max	2.50	470
MS127-560_T	56.00		0.1100	Max	2.35	560
MS127-680_T	68.00		0.1400	Max	2.10	680
MS127-820_T	82.00		0.1600	Max	1.95	820
MS127-101_T	100.00		0.2200	Max	1.70	101
MS127-121_T	120.00		0.2500	Max	1.60	121
MS127-151_T	150.00		0.2800	Max	1.42	151
MS127-181_T	180.00		0.3500	Max	1.30	181
MS127-221_T	220.00		0.3900	Max	1.16	221
MS127-271_T	270.00		0.5600	Max	1.06	271
MS127-331_T	330.00		0.6400	Max	0.95	331
MS127-391_T	390.00		0.7000	Max	0.88	391
MS127-471_T	470.00		0.9800	Max	0.79	471
MS127-561_T	560.00		1.0700	Max	0.73	561
MS127-681_T	680.00		1.4600	Max	0.67	681
MS127-821_T	820.00		1.6400	Max	0.60	821
MS127-102_T	1000.00		1.8200	Max	0.55	102
MS127-152_T	1500.00		2.4000	Max	0.50	152
MS127-182_T	1800.00		2.8000	Max	0.40	182
MS127-222_T	2200.00		2.9500	Max	0.30	222

IDC: 指使电感量比初始值下降 20%或电感器表面温度上升 40℃的电流值 (参考周围环境温度 20℃)。

The rated DC current is that which cause a 20% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃).

额定工作使用电压: DC30V

Rated working voltage: DC30V

项目 Item	测试条件 Test condition	测试仪器 Test equipment
电感量 Ls	<10μH 100k Hz/500mV ≥10μH 1kHz/500mV	HP4263B\IM3532-50 or equivalent
直流电阻 RDC	直流电 direct-current	HP4263B\IRM3545 or equivalent
额定电流 IDC	<10μH 100k Hz/500mV ≥10μH 1kHz/500mV	Microtest 6379 & 6220 or equivalent

MS129 series

型号 Part NO	电感量 Ls (μH)		直流电阻 RDC (Ω)		额定电流 IDC (A)	印字 Marking
	Nominal value	Tol.			Max.	
MS129-1R0NT	1.0	±30%	0.006	Max	19.90	1R0
MS129-1R5NT	1.5	±30%	0.007	Max	13.40	1R5
MS129-2R2NT	2.2	±30%	0.008	Max	12.16	2R2
MS129-3R3NT	3.3	±30%	0.010	Max	12.00	3R3
MS129-4R7NT	4.7	±30%	0.011	Max	10.08	4R7
MS129-5R6NT	5.6	±30%	0.013	Max	9.30	5R6
MS129-6R8NT	6.8	±30%	0.014	Max	8.56	6R8
MS129-8R2NT	8.2	±30%	0.017	Max	8.48	8R2
MS129-100_T	10	N: ±30% M: ±20%	0.018	Max	7.12	100
MS129-120_T	12		0.023	Max	7.04	120
MS129-150_T	15		0.028	Max	5.84	150
MS129-220_T	22		0.041	Max	5.12	220
MS129-330_T	33		0.068	Max	4.25	330
MS129-390_T	39		0.078	Max	3.90	390
MS129-470_T	47		0.080	Max	3.60	470
MS129-560_T	56		0.091	Max	2.85	560
MS129-680_T	68		0.098	Max	2.76	680
MS129-820_T	82		0.138	Max	2.62	820
MS129-101_T	100		0.140	Max	2.50	101
MS129-121_T	120		0.169	Max	2.05	121
MS129-151_T	150		0.245	Max	1.80	151
MS129-181_T	180		0.270	Max	1.66	181
MS129-221_T	220		0.306	Max	1.64	221
MS129-331_T	330		0.488	Max	1.28	331
MS129-471_T	470		0.599	Max	1.06	471
MS129-561_T	560		0.887	Max	1.01	561
MS129-681_T	680		1.003	Max	0.83	681
MS129-821_T	820		1.108	Max	0.81	821
MS129-102_T	1000		1.880	Max	0.70	102

IDC: 指使电感量比初始值下降 20%或电感器表面温度上升 40℃的电流值 (参考周围环境温度 20℃)。

The rated DC current is that which cause a 20% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃).

额定工作使用电压: DC30V

Rated working voltage: DC30V

项目 Item	测试条件 Test condition	测试仪器 Test equipment
电感量 Ls	100k Hz/500mV	HP4263B\IM3532-50 or equivalent
直流电阻 RDC	直流电 direct-current	HP4263B\RM3545 or equivalent
额定电流 IDC	100k Hz/500mV	Microtest 6379 & 6220 or equivalent

◆可靠性测试方法
Reliability Test Method

序号 No.	项目 Items	要求 Requirements	试验方法及备注 Test Methods and Remarks
1	绝缘电阻 Insulation Resistance	$\geq 100M\Omega$	在电感器线圈和磁芯之间施加 100 V 直流电压保持 60s。 100 V DC between inductor coil and core for 60 seconds.
2	可焊性 Solderability	电极面 95%以上覆盖新的焊料。 95% or more of electrode area shall be coated by new solder.	在 $245^{\circ}\text{C} \pm 3^{\circ}\text{C}$ 熔 融 的 焊 锡 (96.5Sn/3.0Ag/0.5Cu) 中浸 $3 \pm 0.3 \text{ s}$ 。 Dip pads in flux and dip in solder pot (96.5Sn/3.0Ag/0.5Cu) at $245^{\circ}\text{C} \pm 3^{\circ}\text{C}$ for (3 ± 0.3) seconds.
3	耐焊接热 Resistance to Soldering Heat	外观无可见机械损伤; 电感量变化率: $\pm 10\%$ 以内。 No visible mechanical damage. Inductance change: Within $\pm 10\%$	在 $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 熔 融 的 焊 锡 (96.5Sn/3.0Ag/0.5Cu) 中浸 $10 \pm 1 \text{ s}$ 。 Dip pads in flux and dip in solder pot (96.5Sn/3.0Ag/0.5Cu) at $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for (10 ± 1) seconds.
4	端子强度 Adhesion of terminal electrode	元件的端子与本体结合无松动、 无脱落。 Strong bond between the pad and the core, without come off PC board.	将电感器用 $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$, $20 \pm 5 \text{ s}$ 焊在带有 0.3 mm 厚锡膏的基板上, 然后用治具垂直电极 面方向加压 10 N , $10 \pm 1 \text{ s}$ 。 Inductors shall be subjected to $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for $20 \pm 5 \text{ s}$ Soldering in the base whit 0.3mm solder. And then aplomb electrode way plus tax 10 N for $10 \pm 1 \text{ s}$ seconds.
5	耐高温 High temperature	外观无可见机械损伤; 电感量变化率: $\pm 10\%$ 以内。 No visible mechanical damage. Inductance change: Within $\pm 10\%$	温度 $+125^{\circ}\text{C} \pm 2^{\circ}\text{C}$, 时间 $1000 \pm 24 \text{ h}$, 在室 温下放置 2 小时后, 48 小时内测试。Temperature $125^{\circ}\text{C} \pm 2^{\circ}\text{C}$, time $1000 \pm 24 \text{ h}$, Test within 48 hours after 2 hours of placement at room temperature
6	耐低温 Low temperature	外观无可见机械损伤; 电感量变化率: $\pm 10\%$ 以内。 No visible mechanical damage. Inductance change: Within $\pm 10\%$	温度 $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$, 时间 $1000 \pm 24 \text{ h}$; 在室 温下放置 2 小时后, 48 小时内测试。 Temperature $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$, time $1000 \pm 24 \text{ h}$; Test within 48 hours after 2 hours of placement at room temperature

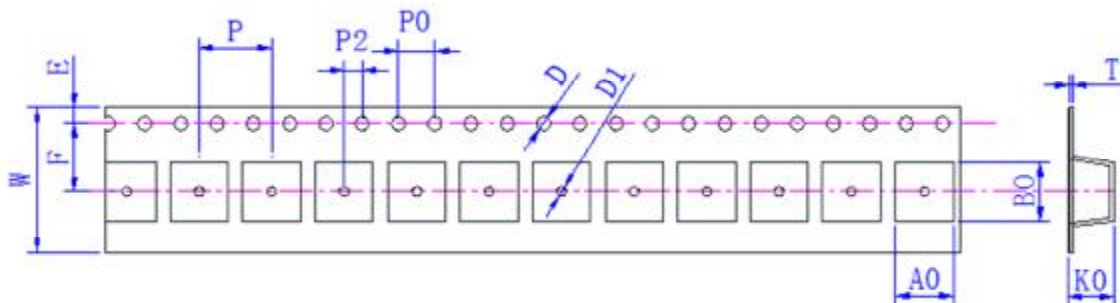
序号 No.	项目 Items	要求 Requirements	试验方法及备注 Test Methods and Remarks
7	温度循环 Temperature Cycling	外观无可见机械损伤; 电感量变化率: ±10%以内。 No visible mechanical damage. Inductance change: Within ±10%	(-40±3) °C, 时间(30±3) min (125°C±2) °C/(30±3) min, 转换时间(2~3) min, 循环 32 次; 在室温下放置 2 小时后、48 小 时内测试。 The test sample shall be placed at (-40±3)°C and (125±2)°C for (30±3) min, different temperature conversion time is 2~3 minutes. The temperature cycle shall be repeated 32 cycles. Test within 48 hours after 2 hours of placement at room temperature.
8	温度特性 Temperature characteristic	电感量变化率 Pc-b, Pc-d 不超过 ±20%。 Inductance change Pc-b, Pc-d: Within ±20%	a: +20 °C (30~45) min → b: -40 °C (30~45) min → c: +20 °C (30~45) min → d: +125 °C (30~45) min → e: +20 °C (30~45) min $P_{c-b} = \frac{L_b - L_c}{L_c} \times 100\%$; $P_{c-d} = \frac{L_d - L_c}{L_c} \times 100\%$
9	恒定湿热 Constant damp heat	外观无可见机械损伤; 电感量变化率: ±10%以内。 No visible mechanical damage. Inductance change: Within ±10%	将电感器放置在于湿度(90~95)%RH, 温度 60 °C±2 °C 的环境中存放 1000±24 0h, 在室 温下放置 2 小时后、48 小时内测试。 Place inductors in humidity (90~95)%RH, 60 °C ± 2 °C temperature 1000±24 0h, Test within 48 hours after 2 hours of placement at room temperature.
10	高温负载 (寿命) High-temperature load (Life-span)	外观无可见机械损伤; 电感量变化率: ±10%以内。 No visible mechanical damage. Inductance change: Within ±10%	温度 85 °C±2°C, 时间 1000±24 0h, 施加额定 电流, 在室温下放置 2 小时后、48 小时内测试。 Temperature 85 °C ± 2 °C, Time 1000±24 0h, Apply a rated current, Test within 48 hours after 2 hours of placement at room temperature. 注: 加载电流时零件表面温度超过 125°C 的, 需 要对电流降额到零件表面温度不超过 125°C。 Note: If the surface temperature of the part over 125 °C when the current is loaded, the current need to reduce until the surface temperature of the part less than 125 °C.

◆包装

Packaging

● 载带尺寸 (单位: mm)

Taping Dimension(Unit: mm)

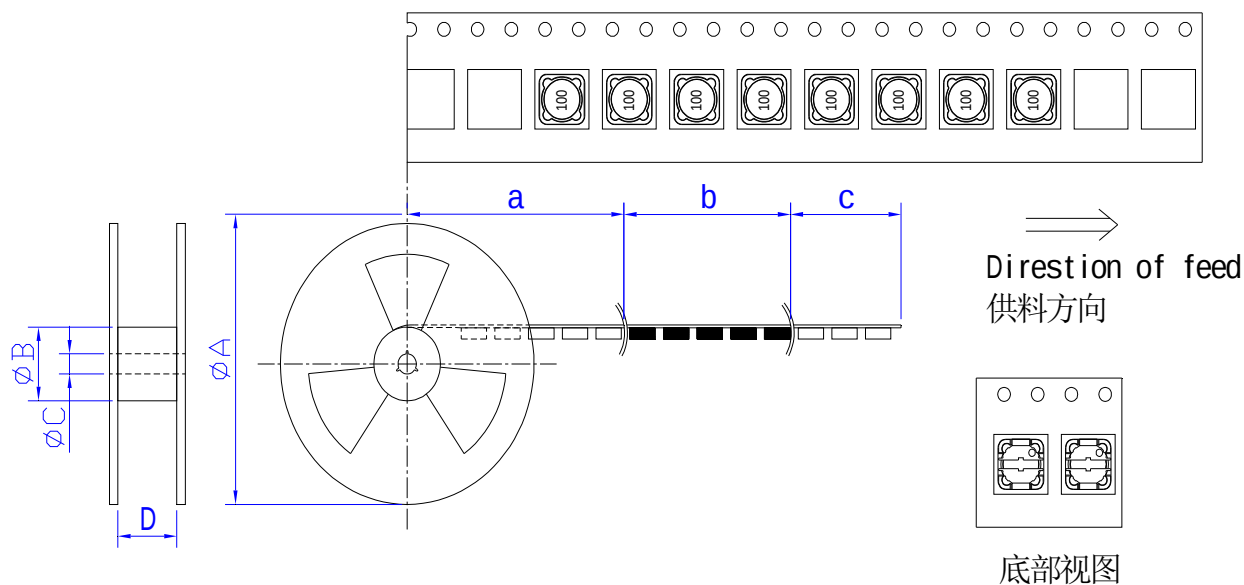


系列 Series	W	A0	B0	D	D1	E	F	K0	P0	P2	P	T
73	16.0±0.5	7.6±0.3	7.6±0.3	1.5±0.3	1.5±0.3	1.75±0.3	7.5±0.3	3.9±0.3	4.0±0.3	2.0±0.3	12.0±0.3	0.35±0.10
74	16.0±0.5	7.6±0.3	7.6±0.3	1.5±0.3	1.5±0.3	1.75±0.3	7.5±0.3	5.0±0.3	4.0±0.3	2.0±0.3	12.0±0.3	0.35±0.10
103R	24.0±0.5	10.5±0.3	10.8±0.3	1.5±0.3	1.5±0.3	1.75±0.3	11.5±0.3	3.2±0.3	4.0±0.3	2.0±0.3	16.0±0.3	0.375±0.10
104R	24.0±0.5	10.5±0.3	10.8±0.3	1.5±0.3	1.5±0.3	1.75±0.3	11.5±0.3	4.2±0.3	4.0±0.3	2.0±0.3	16.0±0.3	0.375±0.10
105R	24.0±0.5	10.5±0.3	10.8±0.3	1.5±0.3	1.5±0.3	1.75±0.3	11.5±0.3	5.1±0.3	4.0±0.3	2.0±0.3	16.0±0.3	0.375±0.10
124	24.0±0.5	12.6±0.3	12.6±0.3	1.5±0.3	1.5±0.3	1.75±0.3	11.5±0.3	5.1±0.3	4.0±0.3	2.0±0.3	16.0±0.3	0.375±0.10
125	24.0±0.5	12.7±0.3	12.65±0.3	1.5±0.3	1.5±0.3	1.75±0.3	11.5±0.3	6.25±0.3	4.0±0.3	2.0±0.3	16.0±0.3	0.375±0.10
127	24.0±0.5	12.7±0.3	12.65±0.3	1.5±0.3	1.5±0.3	1.75±0.3	11.5±0.3	8.25±0.3	4.0±0.3	2.0±0.3	16.0±0.3	0.40±0.10
129	24.0±0.5	12.7±0.3	12.65±0.3	1.5±0.3	1.5±0.3	1.75±0.3	11.5±0.3	10±0.3	4.0±0.3	2.0±0.3	16.0±0.3	0.40±0.10

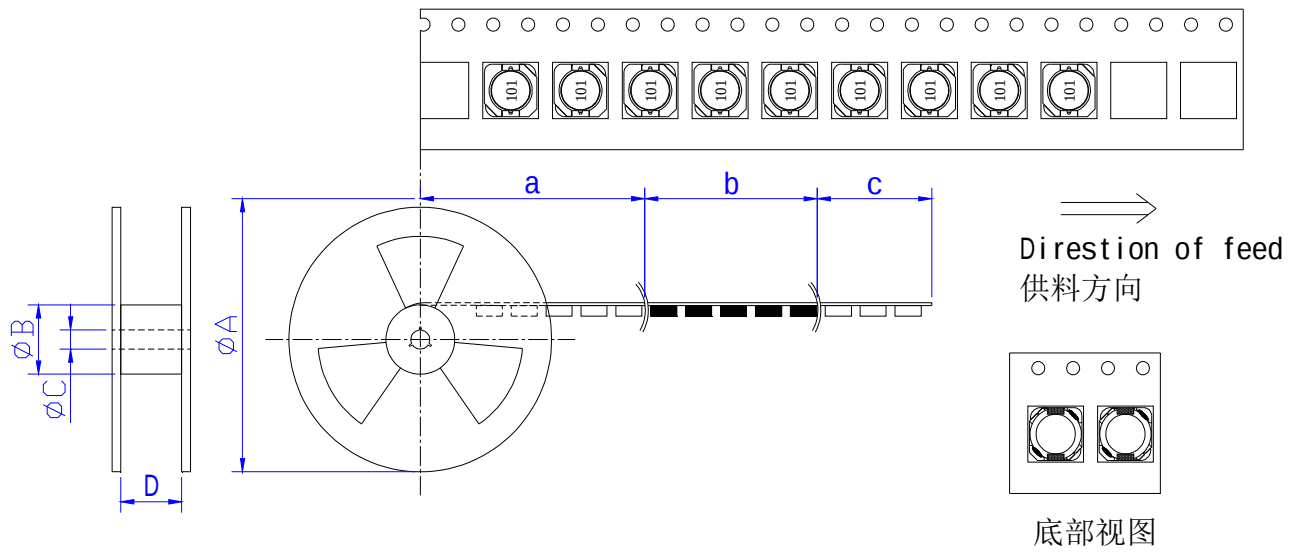
● 卷盘尺寸及产品方向(单位: mm)

Reel dimensions and products direction (Unit: mm)

MS73、MS74、MS124、MS125、MS127、MS129 series



MS103R、MS104R、MS105R series



Series	A	B	C	D	a	b	c
73	330 typ.	100 typ.	13 typ.	16.4 typ.	空带 Blank portions	装元件 Chip cavity	引带 Leader
74	330 typ.	100 typ.	13 typ.	16.4 typ.	空带 Blank portions	装元件 Chip cavity	引带 Leader
103R	330 typ.	100 typ.	13 typ.	24.4 typ.	空带 Blank portions	装元件 Chip cavity	引带 Leader
104R	330 typ.	100 typ.	13 typ.	24.4 typ.	空带 Blank portions	装元件 Chip cavity	引带 Leader
105R	330 typ.	100 typ.	13 typ.	24.4 typ.	空带 Blank portions	装元件 Chip cavity	引带 Leader
124	330 typ.	100 typ.	13 typ.	24.4 typ.	空带 Blank portions	装元件 Chip cavity	引带 Leader
125	330 typ.	100 typ.	13 typ.	24.4 typ.	空带 Blank portions	装元件 Chip cavity	引带 Leader
127	330 typ.	100 typ.	13 typ.	24.4 typ.	空带 Blank portions	装元件 Chip cavity	引带 Leader
129	330 typ.	100 typ.	13 typ.	24.4 typ.	空带 Blank portions	装元件 Chip cavity	引带 Leader

* 剥离力检验

Peeling off force



(1) 盖带的剥离力：沿面胶移动方向拉时要求剥离力为 0.1N~1.0N。

Peeling force should be 0.1~0.7N pulling in the direction of arrow.

(2) 剥离速度：300mm/min。

Speed of peeling off: 300mm/min.

(3) 在纸带剥落时，面胶不能有破损，不能粘纸带。

The cover bond should not be damaged and bond the tape when it peeled off.

型号 Size	73	74	103R	104R	105R	124	125	127	129
每卷数量 REEL	1500	1000	1000	1000	750	750	500	500	300
每盒数量 BOX	6000	4000	3000	3000	2250	2250	1500	1000	600
每箱数量 CASE	18000	12000	9000	9000	6750	4500	3000	2000	1200

● 标签粘贴位置

Label stick station

卷盘标签 Reel label	纸盒标签 Carton label	外箱标签 Outer box label
		

◆ 推荐焊接条件 Recommend Soldering Conditions

● 焊接条件

Soldering Conditions

* 本产品建议使用回流焊接法。Applicable soldering process to the products is reflow soldering.

* 焊接材料

Soldering Materials

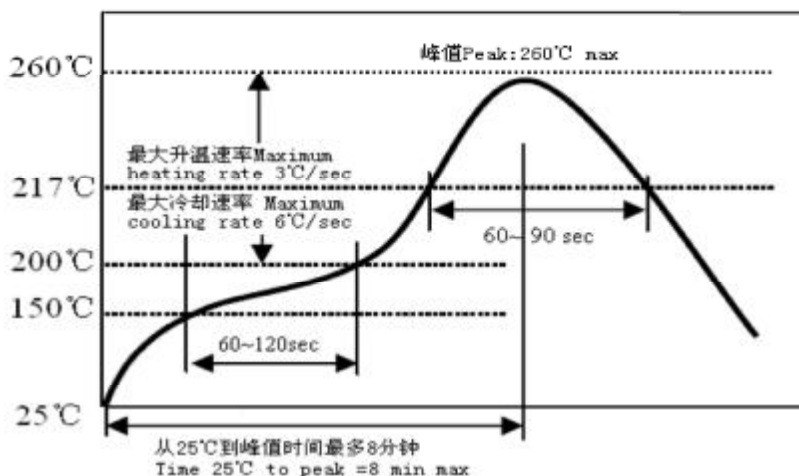
焊料：Sn-3.0Ag-0.5Cu

Solder: Sn-3.0Ag-0.5Cu

助焊剂: 使用松香基助焊剂, 禁止使用卤化物含量超过 0.2wt% 的强酸性助焊剂和水溶性助焊剂。

Flux: Use rosin-based flux, but not strongly acidic flux with chlorine exceeding 0.2 wt%. Do not use water-soluble flux.

● 回流焊曲线 Reflow soldering profile



- (1) 预热条件: 150 ~ 200°C / 60 ~ 120 秒;
Preheat condition: 150 ~ 200°C / 60~120sec
- (2) 允许大于 217°C 时间: 60—90 秒;
Allowed time above 217°C: 60~90sec
- (3) 最大温度: 260 °C;
Max temp: 260 °C
- (4) 最高温的最大时间: 10 秒;
Max time at max temp: 10 sec
- (5) 焊膏: Sn/3.0Ag/0.5Cu;
Solder paste: Sn/3.0Ag/0.5Cu

● 手工焊接

Iron soldering

烙铁温度: 350°C

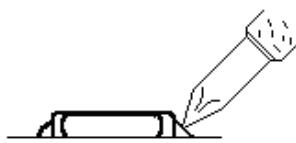
Perform soldering at 350°C.

功率: 最大为 30W

Soldering iron power output: ≤30W.

烙铁停留时间: < 3S (注意不能直接用焊头接触磁体)

Time: < 3S, do not directly touch the core with the tip of the soldering iron.



◆清洗

Cleaning

避免用超声波清洗，如果被超声波清洗，产品可能会被破坏。

Washing by supersonic shall be avoided. If washed by supersonic waves, the products might be broken.

◆存储要求

Storage Requirements

● 存储期限

Storage period

距电感公司出厂检验时间 1 年内，产品可以使用检验时间可以通过包装外侧标签确认。若时间超过 1 年，应检查焊接性能后方可使用。

Products which inspected inductor company over 1 year ago should be examined and used, which can be Confirmed with label on the container. Solder ability should be checked if this period is exceeded.

● 存储条件

Storage conditions

(1) 存放货物的仓库应满足以下条件：

Store products in a warehouse in compliance with the following condition:

温度：产品（产品在封带中） -10 to +40°C;

产品本体 -40 to +85°C.

Temperature: Inductors (product with taping) -10 to +40°C;

Inductors body -40 to +85°C.

相对湿度：30~70%RH.

Humidity: 30~70%RH.

(2) 不要使产品遭受温度和湿度的快速变化。

Do not subject products to rapid changes in temperature and humidity.

(3) 不要将产品存放在化学环境中，如硫酸气体或碱性气体中，否则会降低电极端子的焊接特性和使电感器腐蚀。

Do not store the products in chemical atmosphere such as one containing sulfurous acid gas or alkaline gas, that will causes poor solderability and corrosion of inductors.

(4) 不要以散包装的形式存放产品以防止电感器间的相互碰撞造成磁芯破裂或断线。

Do not store products in bulk packaging to prevent collision among inductors which causes core chipping and wire breakage.

(5) 为了避免受潮气、灰尘等物质的影响，产品应保管于货架上。

Store products on pallets to protect from humidity, dust, etc.

◆注意事项

Notes

(1) 本公司产品适用于 AV 设备、OA 设备、家电、信息服务等一般电子设备中。

Our products are designed and promoted for use in general electronic devices such as audio-equipment, office automation equipment, household appliance and information service.

(2) 当本公司的产品使用在一般电子设备以外的领域时，对于此所引发的设备失效我司将不承担任何法律责任。

In case of using the product for the purpose other than general electronics devices, we shall not be held liable for any dysfunctions in or damage to the equipment with which the product is used.

(3) 本承诺书只保证我司产品作为一个单体时的质量情况，当我司产品被安装到贵公司产品上时，请贵司对使用在贵司电路上的产品情况进行了有效评价和确认。

Our specification limits the quality of the component as a single unit. Please ensure the component is thoroughly evaluated in your application circuit.

(4) 不要对产品施加过大的振动或机械冲击。

Do not apply excessive vibration or mechanical shock to products.

(5) 为防止断线，请不要使用锋利的物体接触线圈，如镊子。

Do not touch wire with sharp objects such as tweezers to prevent wire breakage.

(6) 在产品贴装时不要使用过大的压力，避免磁芯断裂。

Do not apply excessive stress to products mounted on boards to prevent core breakage.

■ 修订履历

版本	日期	修订内容	修订人
24.01	2023-12-13	首次发行 Initial issue	王志聪
A0	2025-7-16	更新模版格式 Update the template format.	王志聪
A1	2025-9-9	更正规格尺寸字母标示 Correct the part No. of dimension.	王志聪
A2	2025-11-25	勘误 MS103R、MS104R、MS105R B 尺寸 Correct the B dimension of MS103R,MS104R and MS105R.	王志聪
A3	2025-12-10	更新标签粘贴位置的图片 Update the pictures of label stick station.	王志聪
A4	2026-3-3	更新 MS124、MS125、MS127、MS129 产品结构与规格尺寸的示意图。 Update the picture of product structure and dimension.	王志聪

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