SMD POWER INDUCTORS

SPB1205 SERIES

1. PART NO. EXPRESSION :

S P B 1 2 0 5 1 0 0 Y Z F - □ □

(a) (b) (c) (d)(e)(f) (g)

(a) Series code

(b) Dimension code

(c) Inductance code : 100 = 10uH

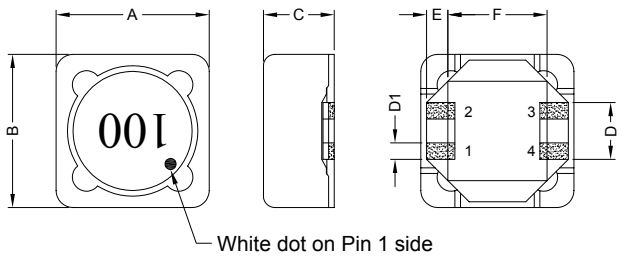
(d) Tolerance code : M = ±20%, Y = ±30%

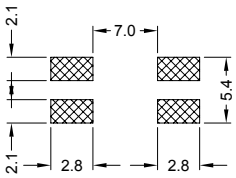
(e) Z : Standard part

(f) F : RoHS Compliant

(g) 11 ~ 99 : Internal controlled number

2. CONFIGURATION & DIMENSIONS :



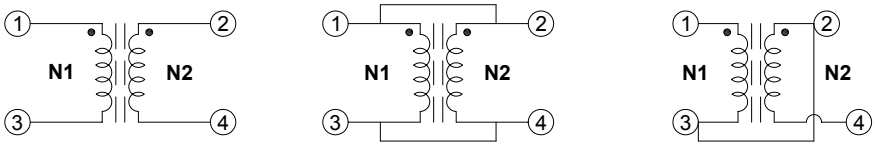


PCB Pattern

Unit:m/m

A	B	C	D	D1	E	F
12.5±0.3	12.5±0.3	6.00 Max.	5.00 Ref.	1.70 Ref.	2.20 Ref.	7.6 Ref.

3. SCHEMATIC :

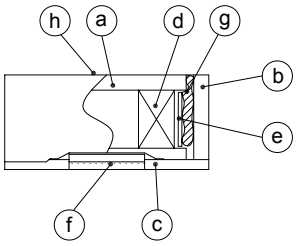


" ● " Polarity

(Parallel)

(Series)

4. MATERIALS :



(a) Core : DR Ferrite Core

(b) Core : RI Ferrite Core

(c) Base : LCP-E4008

(d) Wire : Enamelled Copper Wire

(e) Tape : #560S

(f) Terminal : Tinned Copper Plate

(g) Adhesive : Epoxy Resin

(h) Ink : Bon Marque

RoHS Compliant

NOTE : Specifications subject to change without notice. Please check our website for latest information.

17.12.2010

SUPERWORLD ELECTRONICS (S) PTE LTD

5. GENERAL SPECIFICATION :

a) ΔL/L0A : 30% Typ. at Isat

b) Temp. Rise : 40°C Typ. at Irms

c) Hi-Pot (N1-N2) : 200Vac / 3mA / 1sec

d) Operating temp. : -40°C to +125°C

e) Storage temp. : -40°C to +125°C

f) Resistance to solder heat : 260°C.10secs

6. ELECTRICAL CHARACTERISTICS :

Part No.	Inductance (μH) Ref.	Test Frequency (Hz)	Parallel				Series			
			Inductance (μH) Ref.	RDC (Ω) Max.	Isat (A)	Irms (A)	Inductance (μH) Ref.	RDC (Ω) Max.	Isat (A)	Irms (A)
SPB1205R56YZF-□□	0.560	0.25V/100K	0.540	0.0043	25.0	9.50	2.100	0.0160	12.50	5.00
SPB12051R0YZF-□□	1.000	0.25V/100K	0.984	0.0050	19.0	8.50	3.576	0.0200	9.20	4.60
SPB12051R5YZF-□□	1.500	0.25V/100K	1.478	0.0060	12.5	8.20	5.912	0.0245	7.00	4.00
SPB12052R2YZF-□□	2.200	0.25V/100K	2.208	0.0075	12.0	8.00	8.832	0.0290	6.00	3.80
SPB12053R3YZF-□□	3.300	0.25V/100K	3.084	0.0095	10.2	4.80	12.340	0.0380	5.00	3.20
SPB12054R5YZF-□□	4.500	0.25V/100K	4.250	0.0105	9.00	4.60	16.510	0.0410	4.50	2.80
SPB12056R8YZF-□□	6.800	0.25V/100K	6.588	0.0165	7.00	4.30	26.350	0.0640	3.50	2.30
SPB12058R2YZF-□□	8.200	0.25V/100K	8.048	0.0180	6.50	4.00	32.190	0.0700	3.10	2.00
SPB1205100YZF-□□	10.000	0.25V/100K	9.654	0.0224	5.70	3.70	38.620	0.0895	2.80	1.80
SPB1205150YZF-□□	15.000	0.25V/100K	15.350	0.0298	4.70	3.30	61.400	0.1190	2.30	1.65
SPB1205220YZF-□□	22.000	0.25V/100K	22.360	0.0420	3.65	3.00	89.440	0.1720	1.80	1.52
SPB1205330YZF-□□	33.000	0.25V/100K	33.740	0.0600	3.10	2.70	135.000	0.2460	1.55	1.30
SPB1205470YZF-□□	47.000	0.25V/100K	47.470	0.0810	2.60	2.20	189.900	0.3250	1.35	1.10
SPB1205680YZF-□□	68.000	0.25V/100K	67.910	0.1180	2.20	1.80	271.000	0.4600	1.10	0.80
SPB1205820YZF-□□	82.000	0.25V/100K	86.890	0.1400	2.00	1.60	347.600	0.5580	1.00	0.75
SPB1205101MZF-□□	100.000	0.25V/100K	102.700	0.1830	1.75	1.40	410.800	0.7280	0.90	0.50
SPB1205151MZF-□□	150.000	0.25V/100K	151.100	0.2640	1.50	1.10	604.400	1.0500	0.75	0.45
SPB1205221MZF-□□	220.000	0.25V/100K	216.800	0.3760	1.20	0.90	867.200	1.4900	0.60	0.38
SPB1205331MZF-□□	330.000	0.25V/100K	332.600	0.5600	1.00	0.70	1330.000	2.2400	0.48	0.35
SPB1205471MZF-□□	470.000	0.25V/100K	473.100	0.7740	0.82	0.55	1892.000	3.1000	0.38	0.30
SPB1205681MZF-□□	680.000	0.25V/100K	679.800	1.1450	0.71	0.45	2719.000	4.5800	0.33	0.27
SPB1205821MZF-□□	820.000	0.25V/100K	828.000	1.4590	0.63	0.38	3312.000	5.8400	0.31	0.20
SPB1205102MZF-□□	1000.00	0.25V/100K	975.200	1.6600	0.60	0.28	4032.000	6.6600	0.29	0.18

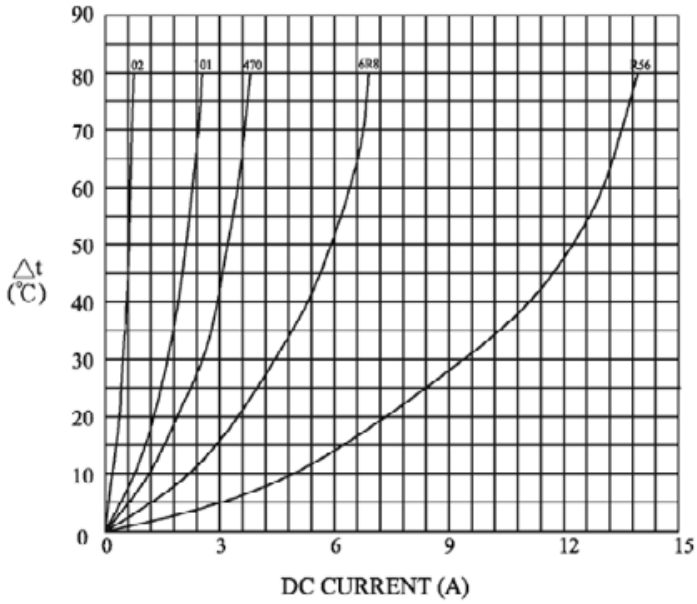
Tolerance code : M = ±20%
Y = ±30%

RoHS Compliant

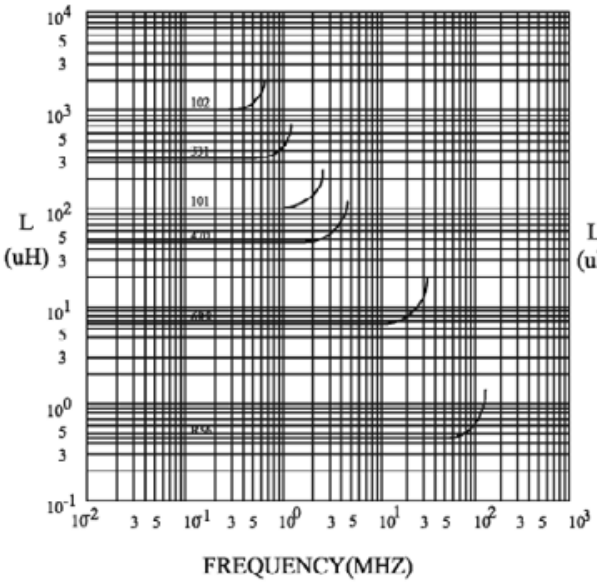
NOTE : Specifications subject to change without notice. Please check our website for latest information.

7. CHARACTERISTICS CURVES : (PARALLEL)

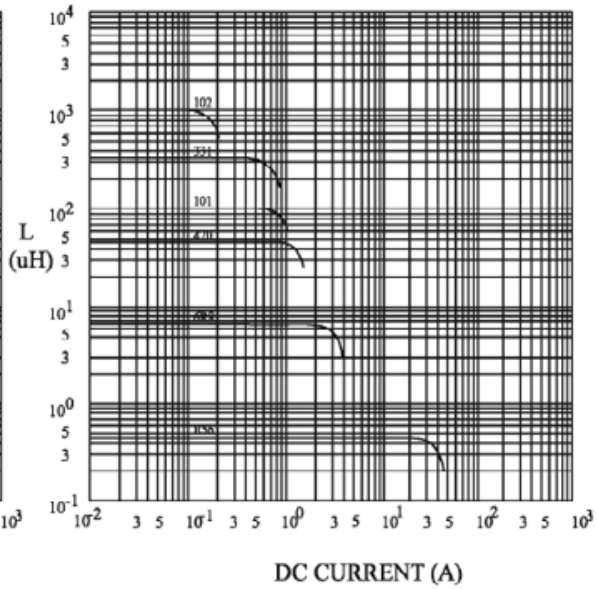
@ TEMP. RISE VS. DC SUPERPOSITION RESPONSE CURVE



@ INDUCTANCE VS. FREQUENCY RESPONSE CURVE



@ INDUCTANCE VS. DC SUPERPOSITION RESPONSE CURVE



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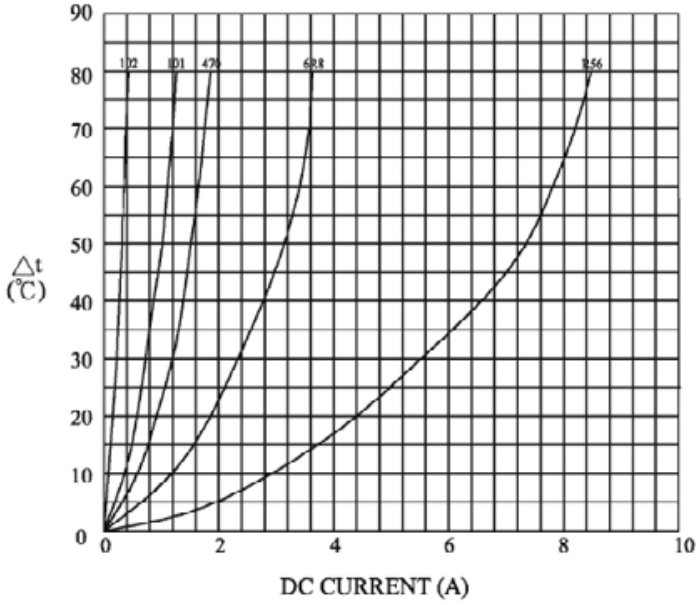
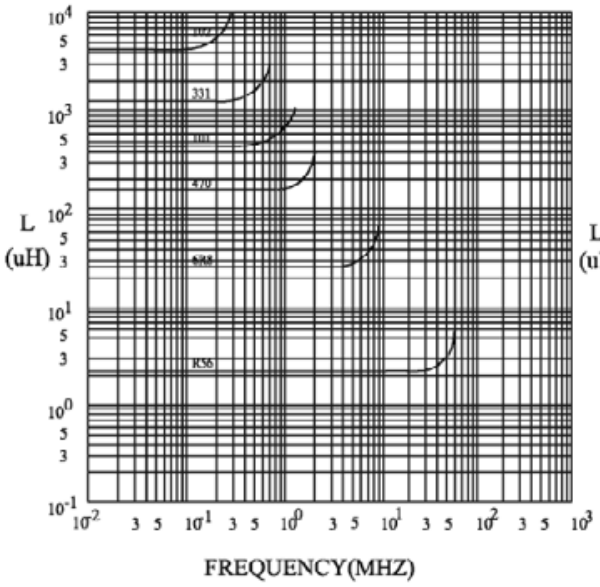
7. CHARACTERISTICS CURVES : (SERIES)

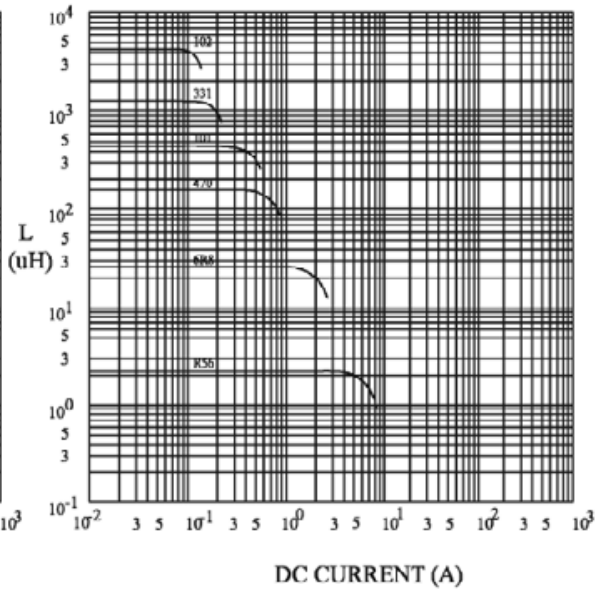
@ TEMP. RISE VS. DC SUPERPOSITION RESPONSE CURVE



@ INDUCTANCE VS. FREQUENCY RESPONSE CURVE



@ INDUCTANCE VS. DC SUPERPOSITION RESPONSE CURVE



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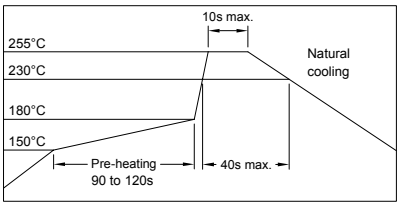
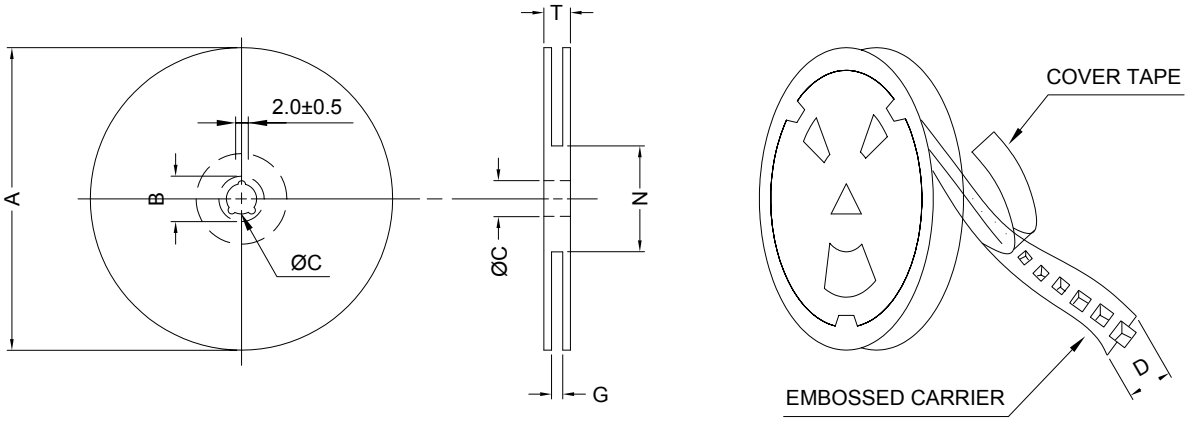
RECOMMENDED SOLDERING CONDITIONS
REFLOW SOLDERINGS

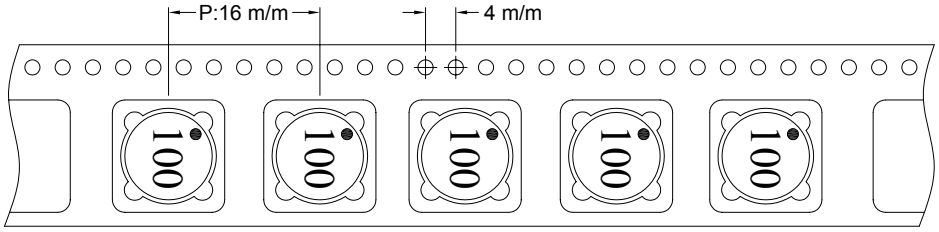


8. PACKAGING INFORMATION :

(1) CONFIGURATION



* CARRIER TAPE WIDTH : D



(2) DIMENSIONS

Unit:m/m

STYLE	A	B	C	D	G	N	T
13-24	330	21±0.8	13±0.5	24	26 +0	50 -0	30.4

(3) Q'TY & G.W. PER PACKAGE

SERIES	INNER : REEL			OUTER : CARTON		
	Q'TY (PCS)	G.W. (gw)	STYLE	Q'TY (PCS)	G.W. (Kg)	SIZE (cm)
SPB1205	600	1900	13-24	2400	11.1	38 x 36.5 x 21

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9. RELIABILTY AND TEST CONDITION :

TEST ITEM	SPECIFICATION	TEST CONDITION
SOLDERABILITY	MORE THAN 90% OF THE TERMINAL ELECTRODE SHALL BE COVERED WITH FRESH SOLDER.	PREHEAT : 125±25°C FOR 60 SECONDS SOLDER : 99%Sn/0.3%Ag/0.7%Cu OR EQUIVALENT SOLDER TEMP. : 245±5°C FLUX : ROSIN DIP TIME : 4±1 SECONDS
THERMAL SHOCK TEST (TEMP. CYCLE)	INDUCTANCE SHALL NOT CHANGE MORE THAN ±20%	ROOM TEMP. 15 MINUTES → -25±2°C 30 MINUTES ROOM TEMP. 15 MINUTES → 85±2°C 30 MINUTES TOTAL : 50 CYCLES
HUMIDITY RESISTANCE TEST		TEMPERATURE : 40±2°C HUMIDITY : 90 ~ 95% APPLIED CURRENT : PER SPEC. TIME : 500 HOURS
HIGH TEMP. RESISTANCE TEST		TEMPERATURE : 85±2°C APPLIED CURRENT : PER SPEC. TIME : 500 HOURS

10. UL CARD :

OBMW2 November 30, 2000
Magnet Wire - Component

PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN) CO LTD E201757
607 BAOLONG INDUSTRIAL ESTATE LONGGANG, SHENZHEN
GUANGDONG CHINA

Mtl Dsg	Coating Type BC	TC	ANSI Type	TI
UEW/U	Polyurethane	—	—	130
PEW/U	Polyester	—	MW5-C	155°C
PEWH/U	Modified Polyester	—	MW30-C	180
PEW-NY/U	Polyester	Polyamide	MW24-C	155
HAI/U	Polyester(Amide)(Imide)	Polyamideimide	MW35,73	200
UEW-NY/U	Polyurethane	Polyamide	MW80-C	155
			MW28-C	130

Marking: Company name and material designation or marked designation on package or reel, and Recognized Component Mark.

See General Information Preceding These Recognitions

1/3/2001 Underwriters Laboratories Inc. Card 1 of 2

RoHS Compliant

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10. UL CARD :

SUMITOMO CHEMICAL CO LTD E54705 (M)
5-33 KITAHAMA 4-CHOME CHUO-KO, OSAKA JAPAN

Mtl Dsg	Col	Min Thk mm	UL94 Flame Class	Elec	RTI Mech with Imp	RTI Mech w/o Imp	HWI	HAI	HVTR	D495	CTI
Liquid crystal plyester (LCP), designated "EKONOL" or "SUMIKASUPER", furnished in the form of pellets, (Contd)											
E4008 , E400X	NC , BK	0.30	94V-0	130	130	130	—	—	—	—	—
		0.75	94V-0	130	130	130	3	4	—	—	—
		1.5	94V-0	130	130	130	2	4	—	—	—
		3.0	94V-0	130	130	130	1	4	0	5	4
E4008	NC , WT , BK	0.30	94V-0	130	130	130	—	—	—	—	—
		0.75	94V-0	220	180	220	3	4	—	—	—
		1.5	94V-0	220	200	240	2	4	—	—	—
		3.0	94V-0	220	200	240	1	4	0	5	4
E4010	NC , BK	0.30	94V-0	130	130	130	—	—	—	—	—
		0.75	94V-0	220	180	220	3	4	—	—	—
		1.5	94V-0	220	200	240	2	4	—	—	—
		3.0	94V-0	220	200	240	1	4	0	5	4
E400(Y)L , E4008L	NC , BK	0.30	94V-0	130	130	130	—	—	—	—	—
		0.75	94V-0	130	130	130	3	4	—	—	—
		1.5	94V-0	130	130	130	2	4	—	—	—
		3.0	94V-0	130	130	130	1	4	0	5	4
E4810	NC , BK	0.30	94V-0	130	130	130	—	—	—	—	—
		0.75	94V-0	130	130	130	0	4	—	—	—
		1.5	94V-0	130	130	130	0	4	—	—	—
		3.0	94V-0	130	130	130	1	4	0	5	4

(X) Denotes any number 1 thru 9.
(Y) Denotes any number 1 thru 7.

TERAOKA SEISAKUSHO CO LTD E56086 (S)
4-22 1-CHOME HIROMACHI SHINAGAWA-KU, TOKYO
JAPAN

Flame returdant aramid paper tape, Cat. Nos. 512F+, 560F+, 565S+, 681S+.
Flame returdant aramid paper tape, Cat. Nos. 560S+, 561S+, 562S+, rated 200 C.
Flame returdant acetate cloth tape, Cat. Nos. 570F+, 571F+, 573F+.
Flame returdant polyester film tape, Cat. Nos. 680F+, 684F.
Flame returdant glass cloth tape, Cat. Nos. 510F+, 540S+, 541F+, 685S+.
Flame returdant glass cloth tape, Cat. No. 54S, rated 200 C.
Flame returdant cotton cloth tape, Cat. Nos. 590F+, 715F+.
Flame returdant polyimide film tape, Cat. No. 650S+, rated 200 C.
Flame returdant tellon tape, Cat. Nos. 841+, 846+.
Flame returdant PVC tape, Cat. Nos. 305F+, 307F+, 380F+.
Flame returdant polyester fiber tape, Cat. Nos. 511F+, 551F+.
Flame returdant epoxy varnish impregnated polyester web tape, Cat. Nos. 530F+.
Flame returdant epoxy varnish impregnated glass paper tape, Cat. No. 531F+.
Flame returdant copper foil tape, Cat. No. 831S+.
Flame returdant copper foil tape, Cat. No. 8321+.
Flame returdant alumlnum foil tape, Cat. Nos. 833+, 834+.
Epoxy varnish impregnated polyester non-woven fabric tape, cat. no. 530F°rated 150 C.
polyester film tape, Cat. Nos. 631S°, 632S, rated 130 C.
Flame returdant polyester film tape, Cat. No. 630F°, rated 130 C.
Flame returdant polyester film/epoxy varnish impregnated polyester fiber tape Cat. No. 673F°, rated 130 C.
Flame returdant polyester film/epoxy varnish impregnated polyester fiber/polyester film tape, Cat. No. 850F°, rated 130 C.
+ - Subjected to Flame Retardant tests only.
°- Complies with Flame Retardent requirements when so marked.
Mraking: Company name or "E56086" and catalog designation and "Flame Retardent" if applice, bie. brinted on the central paper or outer package.

RoHS Compliant

NOTE : Specifications subject to change without notice. Please check our website for latest information.

Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.

Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.