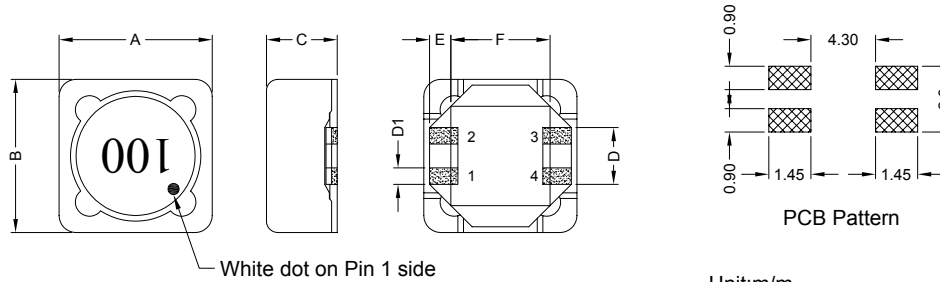


1. PART NO. EXPRESSION :

SPB0704100MZ F - □ □
 (a) (b) (c) (d)(e)(f) (g)

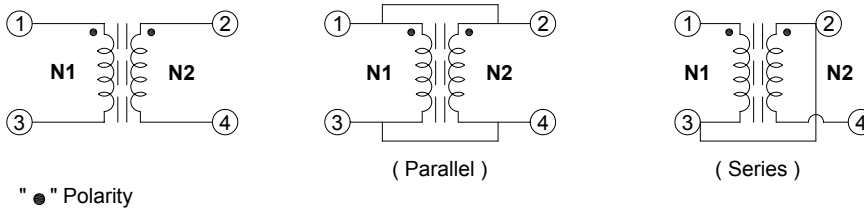
- (a) Series code
- (b) Dimension code
- (c) Inductance code : 100 = 10uH
- (d) Tolerance code : M = ±20%, Y = ±30%
- (e) Z : Standard part
- (f) F : RoHS Compliant
- (g) 11 ~ 99 : Internal controlled number

2. CONFIGURATION & DIMENSIONS :

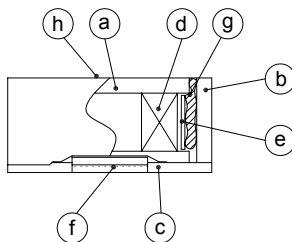


| A | B | C | D | D1 | E | F |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 7.30±0.20 | 7.60±0.20 | 4.45 Max. | 2.70 Ref. | 0.70 Ref. | 1.25 Ref. | 4.50 Ref. |

3. SCHEMATIC :



4. MATERIALS :



- (a) Core : DR Ferrite Core
- (b) Core : RI Ferrite Core
- (c) Base : LCP-E4008
- (d) Wire : Enamelled Copper Wire
- (e) Tape : #56
- (f) Terminal : Tinned Copper Plate
- (g) Adhesive : Epoxy Resin
- (h) Ink : Bon Marque



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



5. GENERAL SPECIFICATION :

- a) $\Delta L/L_{0A}$: 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) |
| SPB0704R80YZF-□□ | 0.80 | 0.25V/100K | 0.752 | 0.0132 | 10.20 | 5.33 | 3.008 | 0.0528 | 5.10 | 2.660 |
| SPB07041R5YZF-□□ | 1.50 | 0.25V/100K | 1.422 | 0.0188 | 7.00 | 4.96 | 5.688 | 0.0752 | 3.80 | 2.480 |
| SPB07042R2YZF-□□ | 2.20 | 0.25V/100K | 1.986 | 0.0204 | 6.60 | 4.66 | 7.944 | 0.0816 | 3.38 | 2.330 |
| SPB07043R3YZF-□□ | 3.30 | 0.25V/100K | 3.396 | 0.0258 | 5.20 | 3.94 | 13.580 | 0.1032 | 2.50 | 1.970 |
| SPB07044R7YZF-□□ | 4.70 | 0.25V/100K | 5.182 | 0.0354 | 4.37 | 3.34 | 20.730 | 0.1416 | 2.15 | 1.670 |
| SPB07046R8YZF-□□ | 6.80 | 0.25V/100K | 7.344 | 0.0492 | 3.50 | 2.60 | 29.380 | 0.1968 | 1.75 | 1.300 |
| SPB07048R2YZF-□□ | 8.20 | 0.25V/100K | 8.566 | 0.0564 | 3.20 | 2.53 | 34.260 | 0.2256 | 1.58 | 1.270 |
| SPB0704100MZF-□□ | 10.0 | 0.25V/100K | 9.882 | 0.0606 | 3.05 | 2.41 | 39.530 | 0.2424 | 1.50 | 1.200 |
| SPB0704150MZF-□□ | 15.0 | 0.25V/100K | 16.090 | 0.0948 | 2.40 | 2.00 | 64.360 | 0.3792 | 1.20 | 1.000 |
| SPB0704220MZF-□□ | 22.0 | 0.25V/100K | 21.730 | 0.1272 | 1.95 | 1.75 | 86.920 | 0.5088 | 1.02 | 0.874 |
| SPB0704330MZF-□□ | 33.0 | 0.25V/100K | 33.010 | 0.2052 | 1.60 | 1.30 | 132.000 | 0.8208 | 0.81 | 0.650 |
| SPB0704470MZF-□□ | 47.0 | 0.25V/100K | 49.640 | 0.2940 | 1.32 | 1.05 | 198.600 | 1.1760 | 0.67 | 0.525 |
| SPB0704680MZF-□□ | 68.0 | 0.25V/100K | 69.670 | 0.4056 | 1.18 | 0.95 | 278.700 | 1.6224 | 0.59 | 0.475 |
| SPB0704820MZF-□□ | 82.0 | 0.25V/100K | 80.950 | 0.4920 | 1.09 | 0.83 | 323.800 | 1.9680 | 0.55 | 0.415 |
| SPB0704101MZF-□□ | 100.0 | 0.25V/100K | 101.600 | 0.5736 | 0.96 | 0.75 | 406.400 | 2.2944 | 0.48 | 0.375 |
| SPB0704151MZF-□□ | 150.0 | 0.25V/100K | 150.000 | 0.8352 | 0.78 | 0.60 | 600.000 | 3.3408 | 0.39 | 0.300 |
| SPB0704221MZF-□□ | 220.0 | 0.25V/100K | 227.000 | 1.2192 | 0.65 | 0.50 | 908.000 | 4.8768 | 0.32 | 0.250 |
| SPB0704331MZF-□□ | 330.0 | 0.25V/100K | 335.600 | 2.1720 | 0.53 | 0.40 | 1342.000 | 8.6880 | 0.25 | 0.200 |
| SPB0704471MZF-□□ | 470.0 | 0.25V/100K | 465.300 | 2.6520 | 0.46 | 0.35 | 1861.000 | 10.6080 | 0.22 | 0.175 |
| SPB0704681MZF-□□ | 680.0 | 0.25V/100K | 671.200 | 4.2480 | 0.37 | 0.28 | 2685.000 | 16.9920 | 0.175 | 0.140 |
| SPB0704821MZF-□□ | 820.0 | 0.25V/100K | 812.700 | 4.6680 | 0.35 | 0.26 | 3251.000 | 18.6720 | 0.17 | 0.130 |
| SPB0704102MZF-□□ | 1000.0 | 0.25V/100K | 1009.000 | 5.1840 | 0.31 | 0.24 | 4036.000 | 20.7360 | 0.16 | 0.120 |

Tolerance code : M = $\pm 20\%$
 Y = $\pm 30\%$



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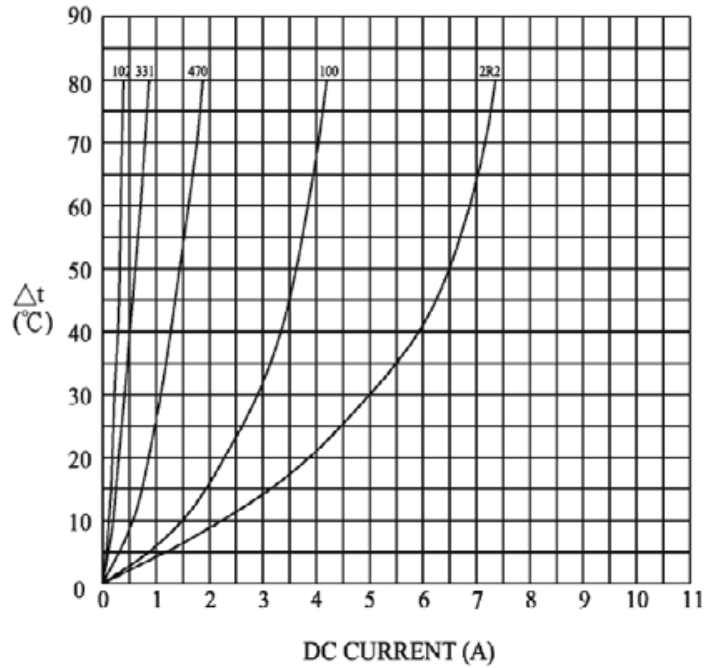
17.12.2010



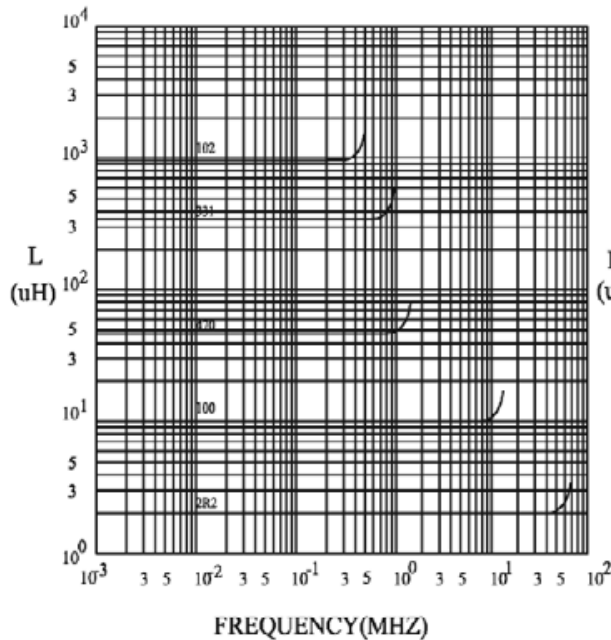
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7. CHARACTERISTICS CURVES : (PARALLEL)

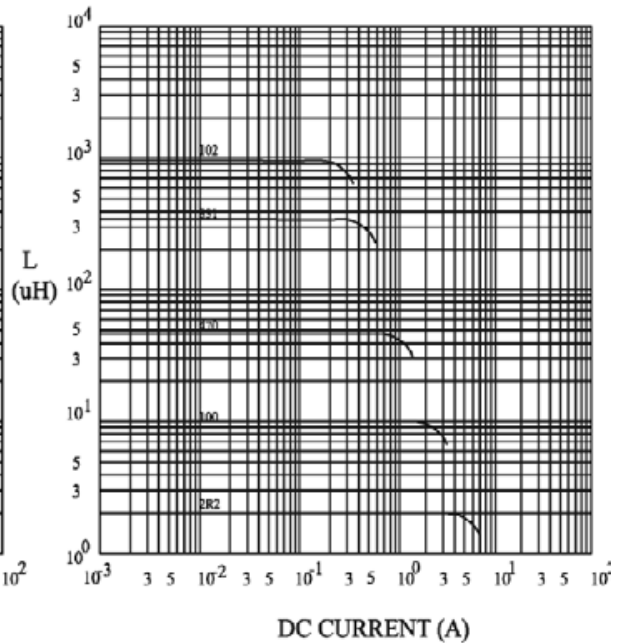
@ TEMP. RISE VS. DC SUPERPOSITION RESPONSE CURVE



@ INDUCTANCE VS. FREQUENCY RESPONSE CURVE



@ INDUCTANCE VS. DC SUPERPOSITION RESPONSE CURVE



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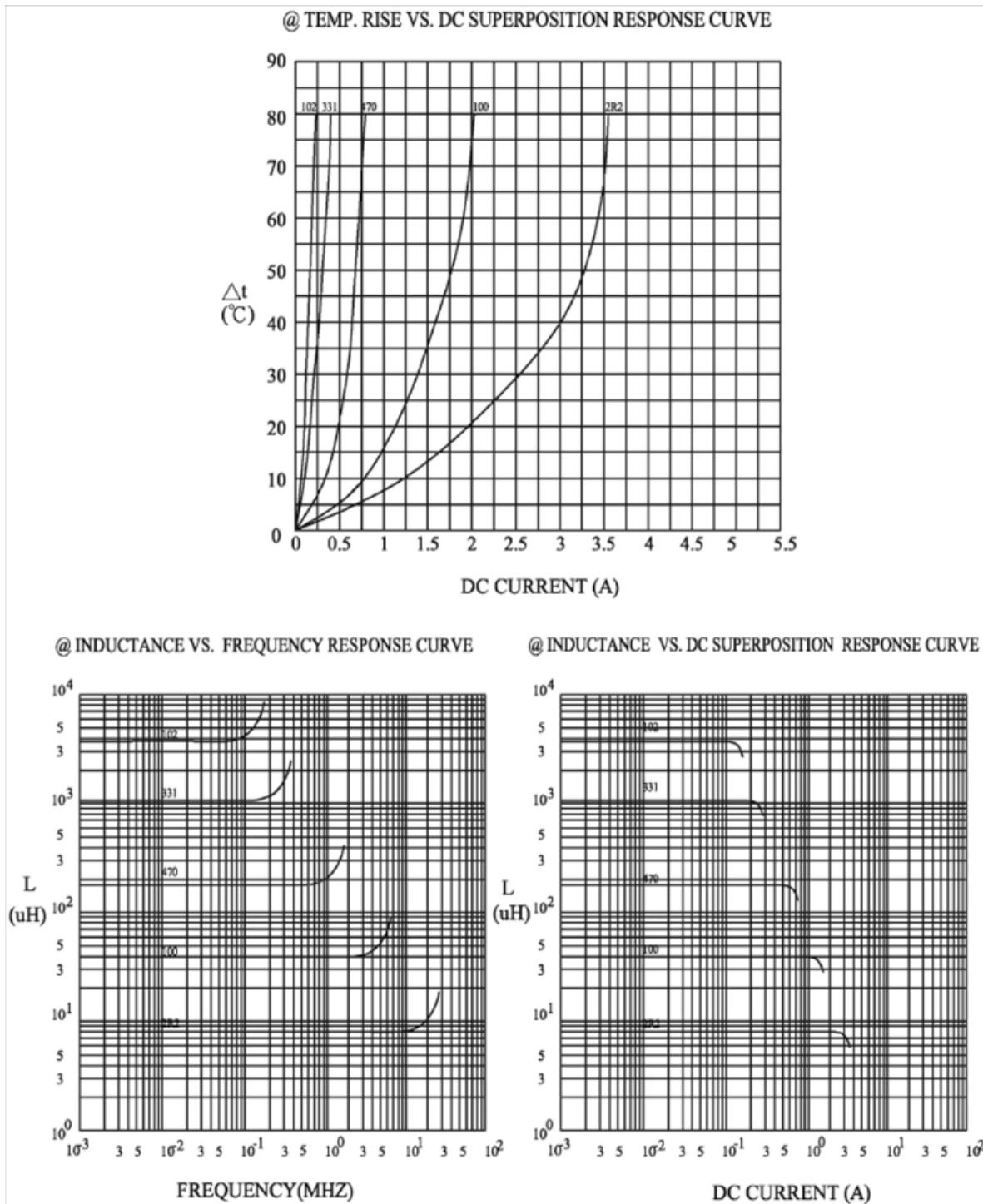
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7. CHARACTERISTICS CURVES : (SERIES)



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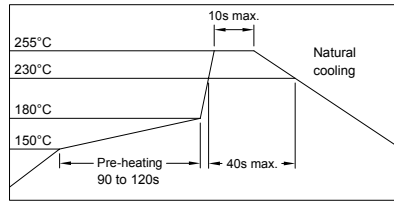
NOTE : Specifications subject to change without notice. Please check our website for latest information.

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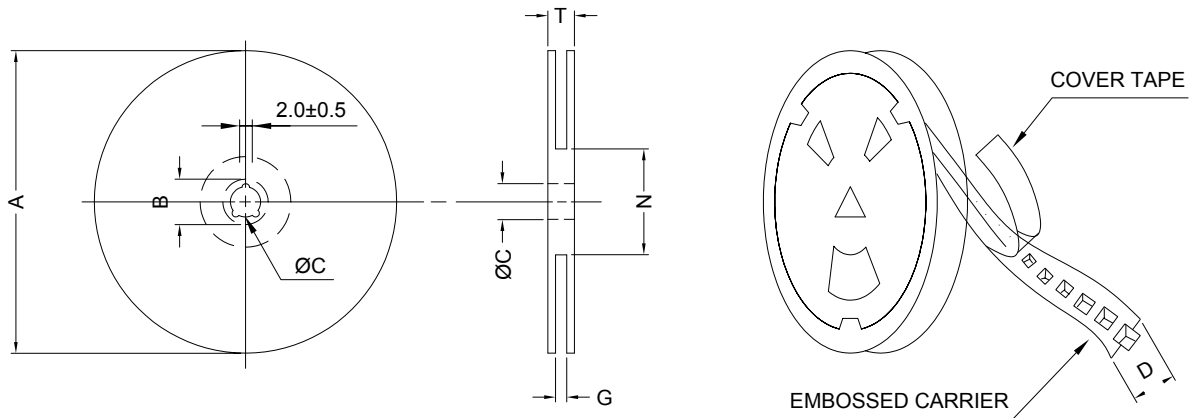
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RECOMMENDED SOLDERING CONDITIONS REFLOW SOLDERINGS

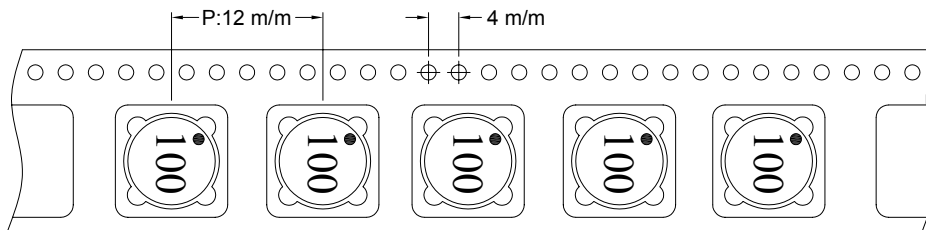


8. PACKAGING INFORMATION :

(1) CONFIGURATION



* CARRIER TAPE WIDTH : D



(2) DIMENSIONS

Unit:m/m

| STYLE | A | B | C | D | G | N | T |
|-------|-----|--------|----|----|------------------|------------------|------|
| 13-16 | 330 | 21±0.8 | 13 | 16 | 18 ⁺⁰ | 50 ⁻⁰ | 22.4 |

(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) |
| SPB0704 | 1000 | 717 | 13-16 | 6000 | 7.9 | 38 x 36.5 x 21 |



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9. RELIABILITY 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% | <table border="0"> <tr> <td>ROOM TEMP.</td> <td>→</td> <td>-25±2°C</td> </tr> <tr> <td>15 MINUTES</td> <td></td> <td>30 MINUTES</td> </tr> <tr> <td>ROOM TEMP.</td> <td>→</td> <td>85±2°C</td> </tr> <tr> <td>15 MINUTES</td> <td></td> <td>30 MINUTES</td> </tr> </table> <p>TOTAL : 50 CYCLES</p> | ROOM TEMP. | → | -25±2°C | 15 MINUTES | | 30 MINUTES | ROOM TEMP. | → | 85±2°C | 15 MINUTES | | 30 MINUTES |
| ROOM TEMP. | → | -25±2°C | | | | | | | | | | | | |
| 15 MINUTES | | 30 MINUTES | | | | | | | | | | | | |
| ROOM TEMP. | → | 85±2°C | | | | | | | | | | | | |
| 15 MINUTES | | 30 MINUTES | | | | | | | | | | | | |
| 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 | | | |
| | Coating Type | ANSI Type | TI |
| Mtl Dsg | BC | TC | |
| UEW/U | Polyurethane | — | 130 |
| PEW/U | Polyester | — | 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



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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 | | H W I | H A I | H V T R | D 4 5 | C 9 T I | |
| | | | | | with Imp | Mech w/o Imp | | | | | | |
| Liquid crystal polyester (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 retardant aramid paper tape, Cat. Nos. 512F+, 560F+, 565S+, 681S+. | | | | | | | | | | | | |
| Flame retardant aramid paper tape, Cat. Nos. 560S+, 561S+, 562S+, rated 200 C. | | | | | | | | | | | | |
| Flame retardant acetate cloth tape, Cat. Nos. 570F+, 571F+, 573F+. | | | | | | | | | | | | |
| Flame retardant polyester film tape, Cat. Nos. 680F+, 684F+. | | | | | | | | | | | | |
| Flame retardant glass cloth tape, Cat. Nos. 510F+, 540S+, 541F+, 685S+. | | | | | | | | | | | | |
| Flame retardant glass cloth tape, Cat. No. 54S, rated 200 C. | | | | | | | | | | | | |
| Flame retardant cotton cloth tape, Cat. Nos. 590F+, 715F+. | | | | | | | | | | | | |
| Flame retardant polyimide film tape, Cat. No. 650S+, rated 200 C. | | | | | | | | | | | | |
| Flame retardant tellon tape, Cat. Nos. 841+, 846+. | | | | | | | | | | | | |
| Flame retardant PVC tape, Cat. Nos. 305F+, 307F+, 380F+. | | | | | | | | | | | | |
| Flame retardant polyester fiber tape, Cat. Nos. 511F+, 551F+. | | | | | | | | | | | | |
| Flame retardant epoxy varnish impregnated polyester web tape, Cat. Nos. 530F+. | | | | | | | | | | | | |
| Flame retardant epoxy varnish impregnated glass paper tape, Cat. No. 531F+. | | | | | | | | | | | | |
| Flame retardant copper foil tape, Cat. No. 831S+. | | | | | | | | | | | | |
| Flame retardant copper foil tape, Cat. No. 8321+. | | | | | | | | | | | | |
| Flame retardant aluminum 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 retardant polyester film tape, Cat. No. 630F°, rated 130 C. | | | | | | | | | | | | |
| Flame retardant polyester film/epoxy varnish impregnated polyester fiber tape Cat. No. 673F°, rated 130 C. | | | | | | | | | | | | |
| Flame retardant 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 applyce, bic. printed on the central paper or outer package. | | | | | | | | | | | | |



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PG. 7