

## 1. PART NO. EXPRESSION :

SPB1205100YZF-□□  
 (a) (b) (c) (d)(e)(f) (g)

(a) Series code

(b) Dimension code

(c) Inductance code : 100 = 10uH

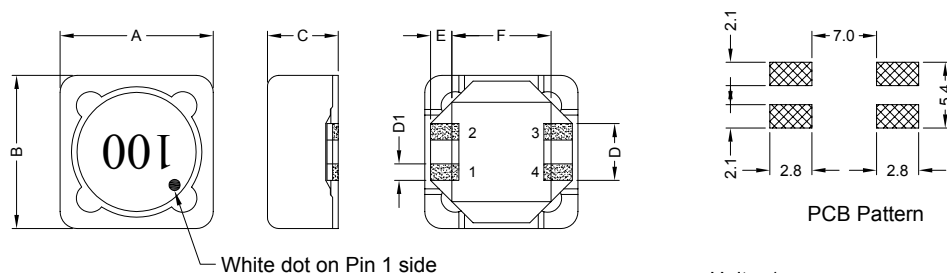
(d) Tolerance code : M =  $\pm 20\%$ , Y =  $\pm 30\%$

(e) Z : Standard part

(f) F : RoHS Compliant

(g) 11 ~ 99 : Internal controlled number

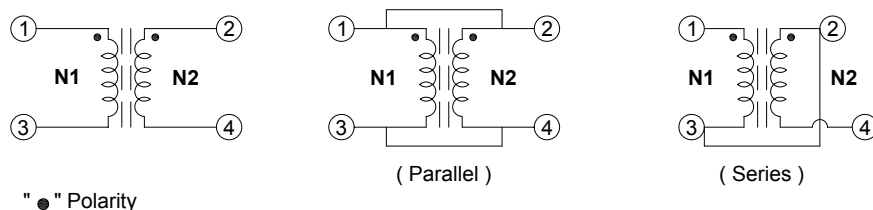
## 2. CONFIGURATION & DIMENSIONS :



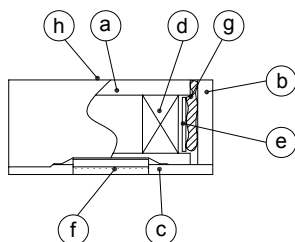
Unit:m/m

| A              | B              | C         | D         | D1        | E         | F        |
|----------------|----------------|-----------|-----------|-----------|-----------|----------|
| 12.5 $\pm$ 0.3 | 12.5 $\pm$ 0.3 | 6.00 Max. | 5.00 Ref. | 1.70 Ref. | 2.20 Ref. | 7.6 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 : #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

PG. 1

## 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<br>( $\mu H$ )<br>Ref. | Test<br>Frequency<br>(Hz) | Parallel                          |                             |             |             | Series                            |                             |             |             |
|------------------|-----------------------------------|---------------------------|-----------------------------------|-----------------------------|-------------|-------------|-----------------------------------|-----------------------------|-------------|-------------|
|                  |                                   |                           | Inductance<br>( $\mu H$ )<br>Ref. | RDC<br>( $\Omega$ )<br>Max. | Isat<br>(A) | Irms<br>(A) | Inductance<br>( $\mu H$ )<br>Ref. | RDC<br>( $\Omega$ )<br>Max. | Isat<br>(A) | Irms<br>(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 =  $\pm 20\%$

Y =  $\pm 30\%$



**RoHS Compliant**

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

17.12.2010

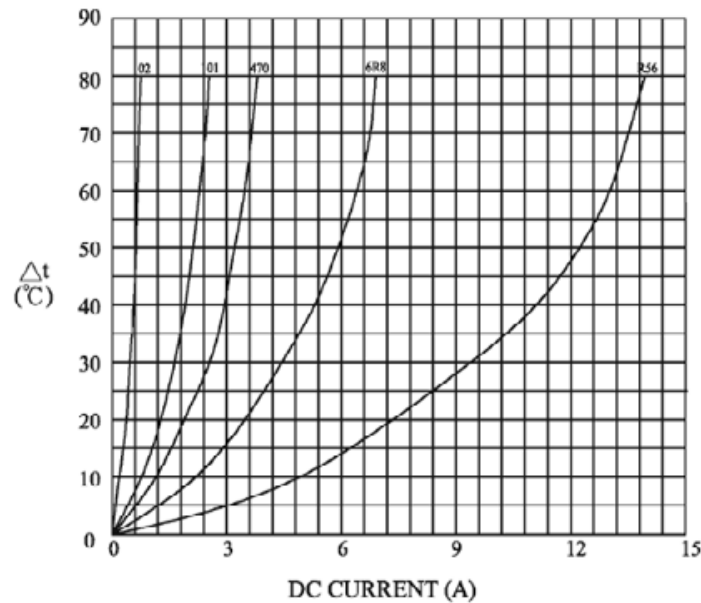


**SUPERWORLD ELECTRONICS (S) PTE LTD**

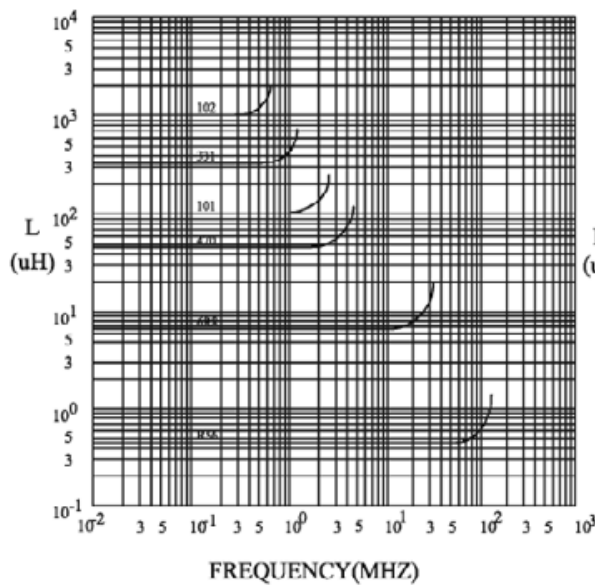
PG. 2

### 7. CHARACTERISTICS CURVES : ( PARALLEL )

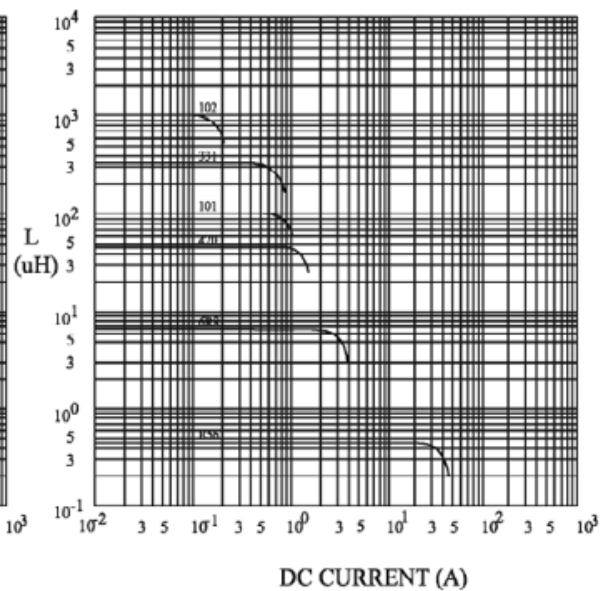
@ TEMP. RISE VS. DC SUPERPOSITION RESPONSE CURVE



@ INDUCTANCE VS. FREQUENCY RESPONSE CURVE



@ INDUCTANCE VS. DC SUPERPOSITION RESPONSE CURVE



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



**RoHS Compliant**

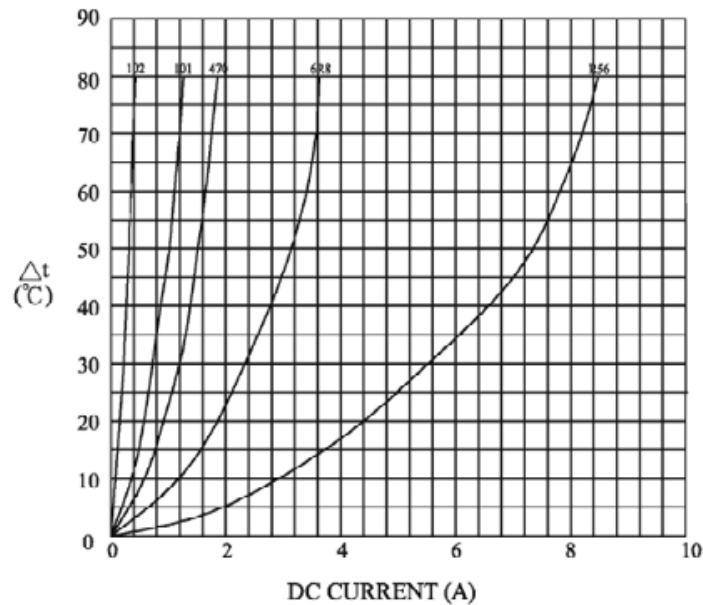


**SUPERWORLD ELECTRONICS (S) PTE LTD**

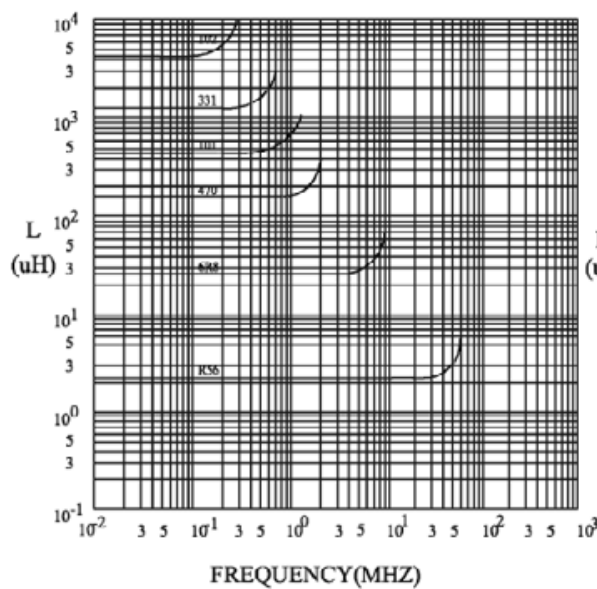
17.12.2010

## 7. CHARACTERISTICS CURVES : ( SERIES )

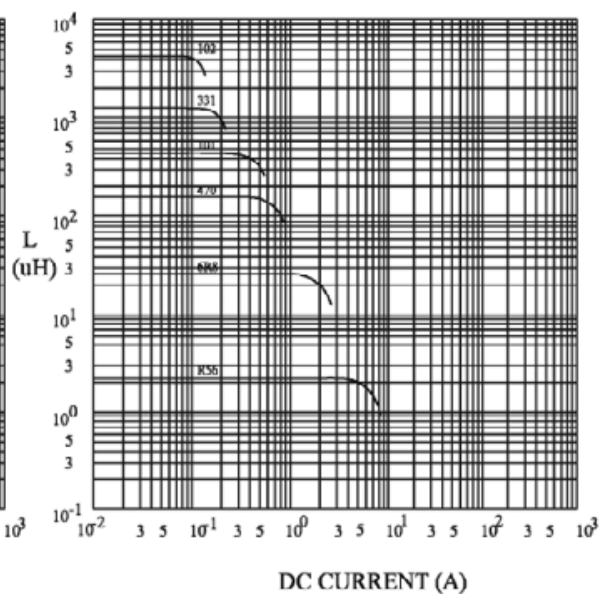
@ TEMP. RISE VS. DC SUPERPOSITION RESPONSE CURVE



@ INDUCTANCE VS. FREQUENCY RESPONSE CURVE



@ INDUCTANCE VS. DC SUPERPOSITION RESPONSE CURVE



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



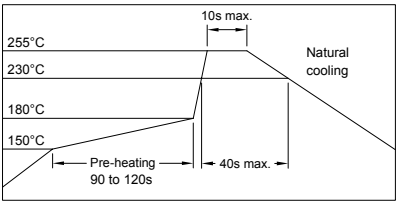
RoHS Compliant

17.12.2010



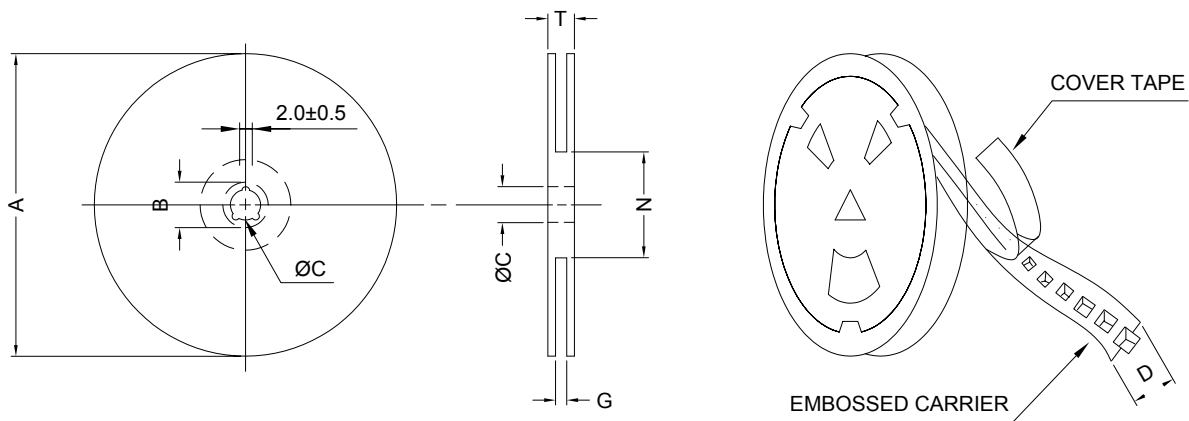
SUPERWORLD ELECTRONICS (S) PTE LTD

RECOMMENDED SOLDERING CONDITIONS  
REFLOW SOLDERINGS

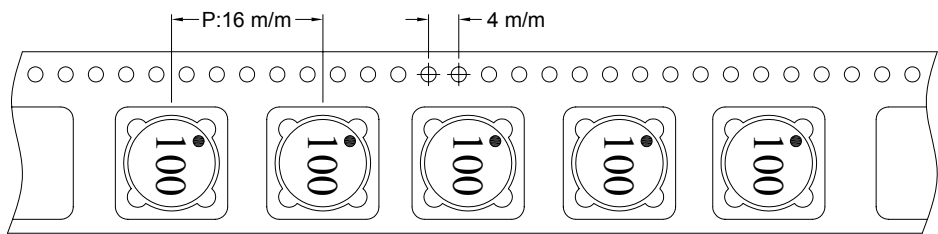


8. PACKAGING INFORMATION :

( 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 <sup>+0</sup> | 50 <sup>-0</sup> | 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 |



RoHS Compliant

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

17.12.2010

## 9. RELIABILITY AND TEST CONDITION :

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

## 10. UL CARD :

|                                                            |    |                          |                |       |
|------------------------------------------------------------|----|--------------------------|----------------|-------|
| <b>OBMW2</b>                                               |    | <b>November 30, 2000</b> |                |       |
| <b>Magnet Wire - Component</b>                             |    |                          |                |       |
| <b>PACIFIC ELECTRIC WIRE &amp; CABLE (SHENZHEN) CO LTD</b> |    |                          | <b>E201757</b> |       |
| <b>607 BAOLONG INDUSTRIAL ESTATE LONGGANG, SHENZHEN</b>    |    |                          |                |       |
| <b>GUANGDONG CHINA</b>                                     |    |                          |                |       |
| Mtl Dsg                                                    | BC | Coating Type             | ANSI Type      | TI    |
| UEW/U                                                      |    | Polyurethane             | —              | 130   |
| PEW/U                                                      |    | Polyester                | —              | 155°C |
| PEWH/U                                                     |    | Modified Polyester       | —              | 180   |
| PEW-NY/U                                                   |    | Polyester                | Polyamide      | 155   |
| HAI/U                                                      |    | Polyester(Amide)(Imide)  | Polyamideimide | 200   |
| UEW-NY/U                                                   |    | Polyurethane             | Polyamide      | 155   |
|                                                            |    |                          | MW28-C         | 130   |
|                                                            |    |                          | MW80-C         | 155   |
|                                                            |    |                          | MW35,73        | 200   |
|                                                            |    |                          | MW24-C         | 155   |
|                                                            |    |                          | MW30-C         | 180   |
|                                                            |    |                          | MW5-C          | 155°C |

**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**

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



**SUPERWORLD ELECTRONICS (S) PTE LTD**

17.12.2010

PG. 6

## 10. UL CARD :

| SUMITOMO CHEMICAL CO LTD                                                                                        |                              |                  |                        |      |             |     |            |   |   | E54705 (M) |   |   |
|-----------------------------------------------------------------------------------------------------------------|------------------------------|------------------|------------------------|------|-------------|-----|------------|---|---|------------|---|---|
| 5-33 KITAHAMA 4-CHOME CHUO-KO, OSAKA JAPAN                                                                      |                              |                  |                        |      |             |     |            |   |   |            |   |   |
| Mtl Dsg                                                                                                         | Col                          | Min<br>Thk<br>mm | UL94<br>Flame<br>Class | Elec | RTI         |     | w/o<br>Imp | H | H | H V        | D | C |
|                                                                                                                 |                              |                  |                        |      | with<br>Imp | Imp |            | W | A | T          | 9 | T |
| 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 | — | —          | — | — |
| E4008                                                                                                           | NC , WT , BK                 | 0.30             | 94V-0                  | 130  | 130         | 130 | 1          | 4 | 0 | 5          | 4 | — |
|                                                                                                                 |                              | 0.75             | 94V-0                  | 220  | 180         | 220 | 3          | 4 | — | —          | — | — |
|                                                                                                                 |                              | 1.5              | 94V-0                  | 220  | 200         | 240 | 2          | 4 | — | —          | — | — |
| E4010                                                                                                           | NC , BK                      | 0.30             | 94V-0                  | 220  | 200         | 240 | 1          | 4 | 0 | 5          | 4 | — |
|                                                                                                                 |                              | 0.75             | 94V-0                  | 130  | 130         | 130 | —          | — | — | —          | — | — |
|                                                                                                                 |                              | 1.5              | 94V-0                  | 220  | 180         | 220 | 3          | 4 | — | —          | — | — |
| E400(Y)L , E4008L                                                                                               | NC , BK                      | 0.30             | 94V-0                  | 220  | 200         | 240 | 2          | 4 | — | —          | — | — |
|                                                                                                                 |                              | 0.75             | 94V-0                  | 220  | 200         | 240 | 1          | 4 | 0 | 5          | 4 | — |
|                                                                                                                 |                              | 1.5              | 94V-0                  | 130  | 130         | 130 | 3          | 4 | — | —          | — | — |
| E4810                                                                                                           | NC , BK                      | 0.30             | 94V-0                  | 130  | 130         | 130 | 3          | 4 | — | —          | — | — |
|                                                                                                                 |                              | 0.75             | 94V-0                  | 130  | 130         | 130 | 2          | 4 | — | —          | — | — |
|                                                                                                                 |                              | 1.5              | 94V-0                  | 130  | 130         | 130 | 1          | 4 | 0 | 5          | 4 | — |
|                                                                                                                 |                              | 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 | — | —          | — | — |
| (X)                                                                                                             | Denotes any number 1 thru 9. | 0.30             | 94V-0                  | 130  | 130         | 130 | 1          | 4 | 0 | 5          | 4 | — |
|                                                                                                                 |                              |                  |                        |      |             |     |            |   |   |            |   |   |
| (Y) Denotes any number 1 thru 7.                                                                                |                              |                  |                        |      |             |     |            |   |   |            |   |   |

TERAOKA SEISAKUSHO CO LTD

4-22 1-CHOME HIROMACHI SHINAGAWA-KU, TOKYO

JAPAN

E56086 (S)

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. 34S, 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 Retardant requirements when so marked.

Making: Company name or "E56086" and catalog designation and "Flame Retardant" if applyce,

bic. printed on the central paper or outer package.



RoHS Compliant

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

17.12.2010



SUPERWORLD ELECTRONICS (S) PTE LTD

PG. 7

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9