

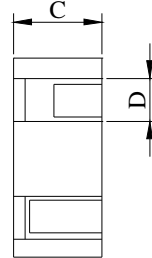
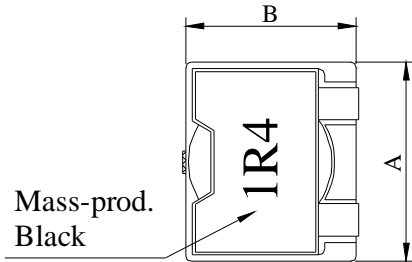
# SPECIFICATION FOR APPROVAL

REF : 20091104-A

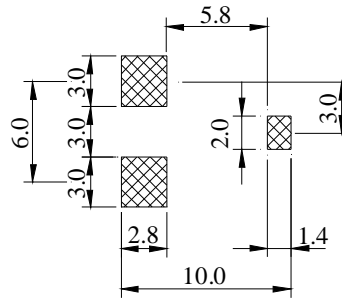
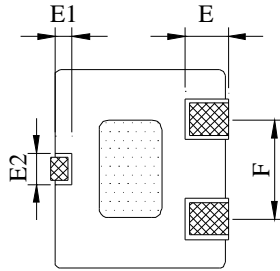
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PROD. NAME	SHIELDED SMD POWER INDUCTOR	ABC'S DWG No.	SP1045□□□□L□-□□□
		ABC'S ITEM No.	

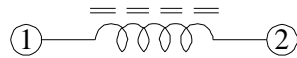
## I . MECHANICAL DIMENSIONS :



- A : 11.00±0.30 m/m
- B : 9.35±0.30 m/m
- C : 4.50±0.30 m/m
- D : 2.10 typ. m/m
- E : 2.00 typ. m/m
- E1: 1.00 typ. m/m
- E2: 1.50 typ. m/m
- F : 6.00 typ. m/m

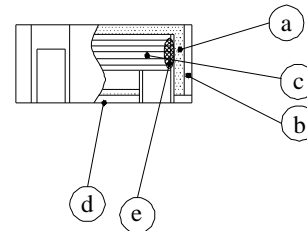


## II . SCHEMATIC DIAGRAM :

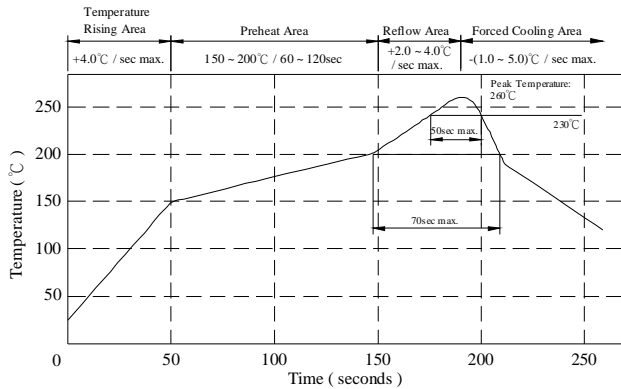


## III . MATERIALS LIST :

- a . Core : Ferrite ER core
- b . Base : UL 94V-0
- c . Wire : Ultra-fine rectangular Enamelled copper wire
- d . Clip : Cu / Ni / Sn
- e . Adhesive : Epoxy resin
- f . Remark : Products comply with RoHS' requirements



Peak Temp : 260°C max.  
 Max time above 230°C : 50sec max.  
 Max time above 200°C : 70sec max.



## IV . GENERAL SPECIFICATION :

- a . Storage temp. : -55°C ~ +135°C
- b . Operating temp. : -55°C ~ +135°C  
(Temp. rise included)
- c . Resistance to solder heat : 260°C. 10 secs.

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NAME	POWER INDUCTOR	ABC'S ITEM No.	

## V . ELECTRICAL CHARACTERISTICS :

DWG No.	Inductance L ( $\mu$ H )	Isat ( A )	Irms ( A )	RDC ( m $\Omega$ )	
				max.	typ.
SP1045R36YL□-□□□	$0.36 \pm 30 \%$	28.0	28.5	1.7	1.3
SP1045R80ML□-□□□	$0.80 \pm 20 \%$	18.0	17.0	3.9	3.0
SP10451R4ML□-□□□	$1.40 \pm 20 \%$	13.5	13.5	4.4	3.4
SP10452R2ML□-□□□	$2.20 \pm 20 \%$	11.5	10.0	8.7	6.7
SP10453R2ML□-□□□	$3.20 \pm 20 \%$	9.0	9.0	10.4	8.0

- 1). □ : Packaging information ... A: Bulk B: Taping Reel
- 2). "-□□□":Reference code
- 3). Measured frequency of inductance is 100 KHz / 1V
- 4). Isat base on inductance drop 25% typ. of L value at 20°C
- 5). Irms base on temp. rise 40°C max.

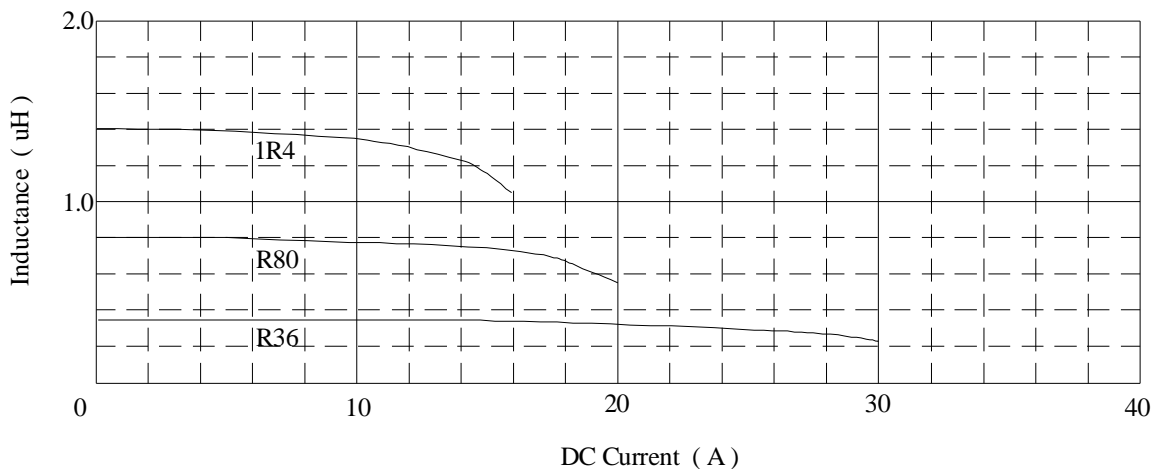
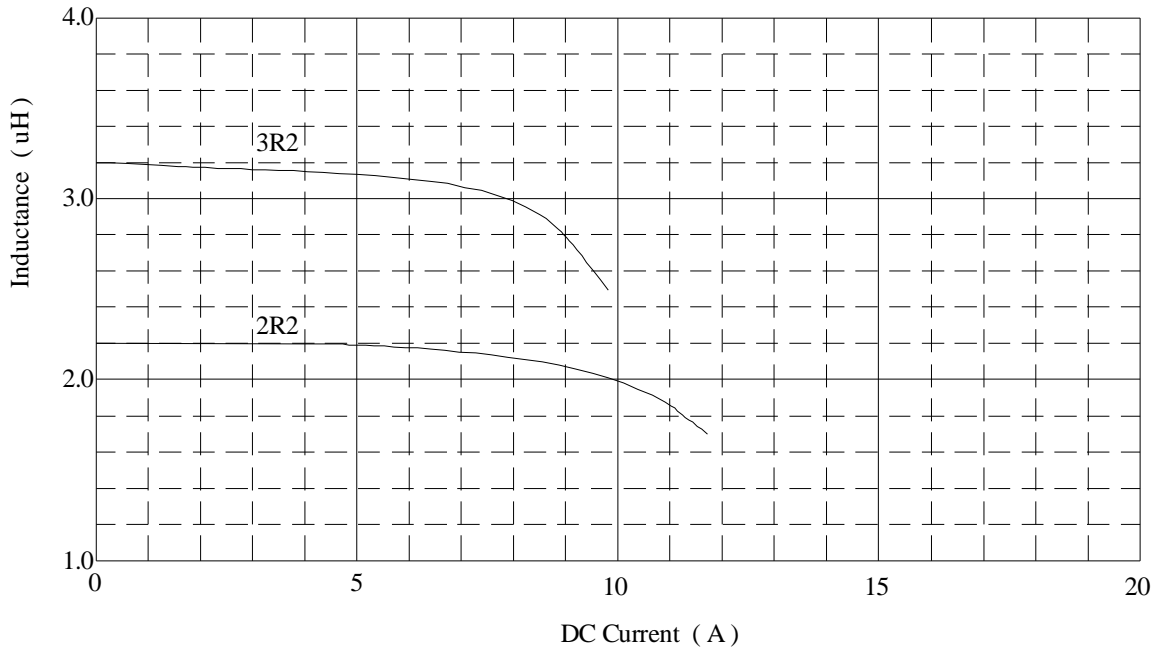
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@ Inductance VS. DC Superposition characteristics



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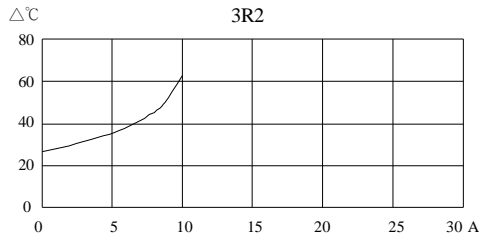
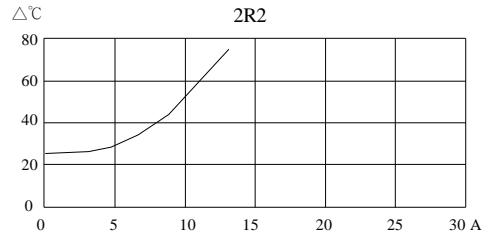
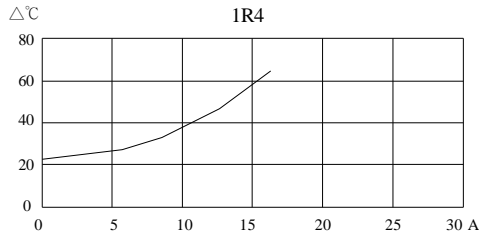
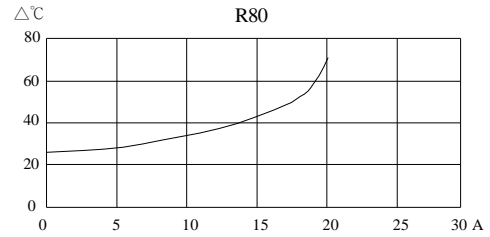
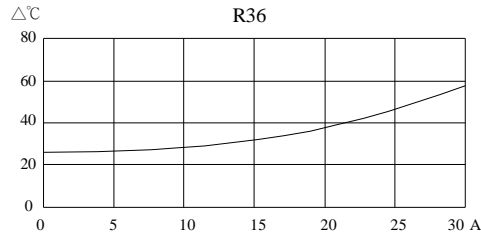
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@ DC Current VS Temperature Rise



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千如電子集團  
ABC ELECTRONICS GROUP.

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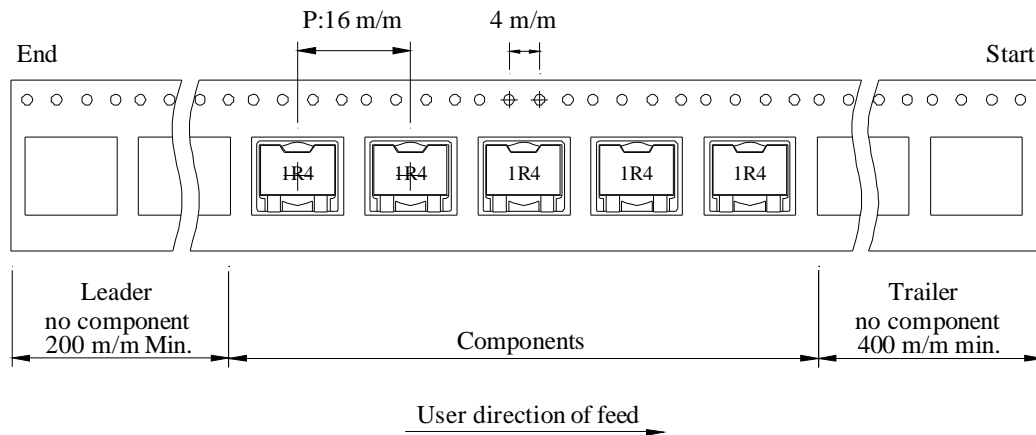
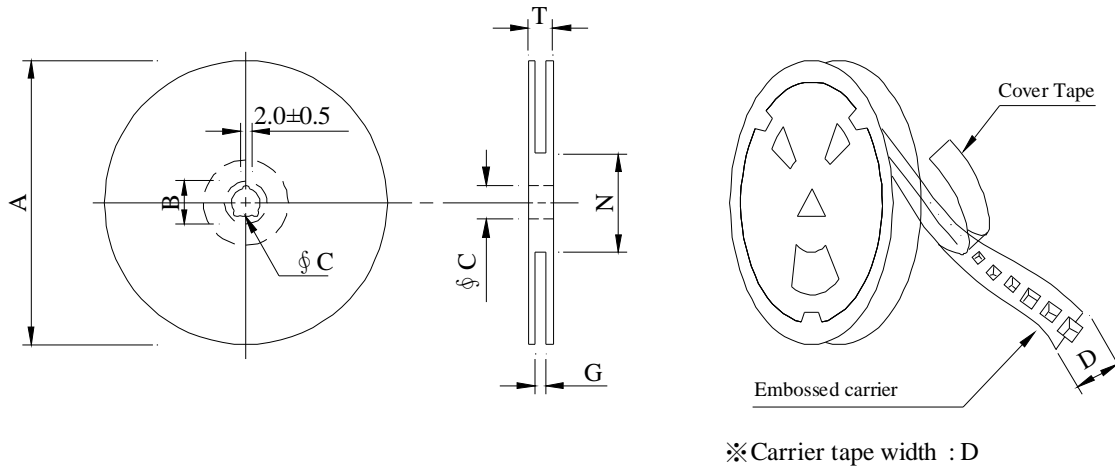
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## VII . PACKAGING INFORMATION :

( 1 ) Configuration



( 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)
SP1045	600	700	13 - 24	2,400	6.50	40 x 40 x 24

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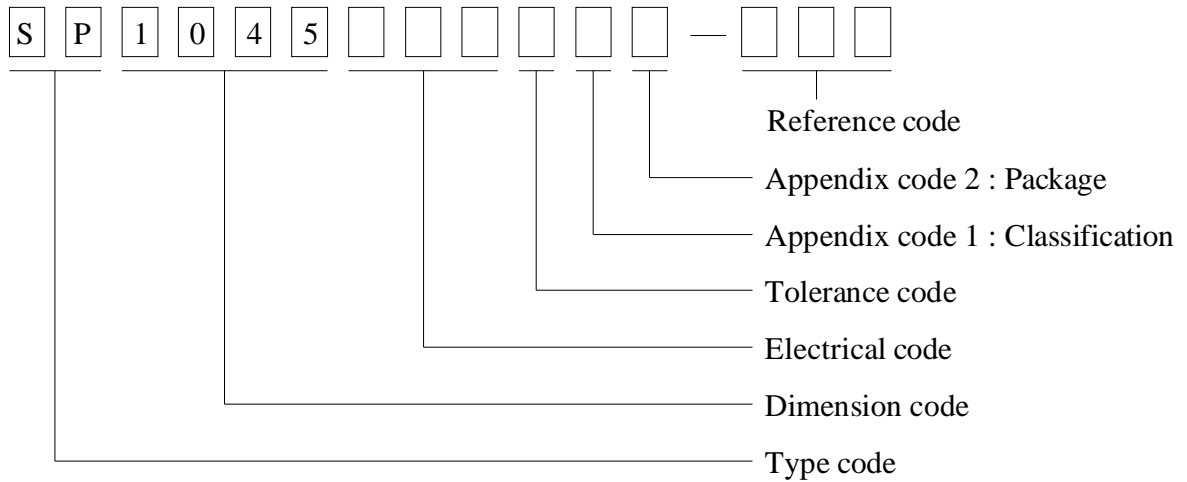
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**VII . DWGING NUMBER EXPRESSION :**



**Appendix code 1 : Product Classification**

L : Lead Free Standard products comply with RoHS' requirements

1 ~ 9 : Lead Free Special products comply with RoHS' requirements

**Appendix code 2 : Package Information**

Code	Inner package	Inner package Q'TY	Remark
A	T.B.D.	T.B.D.	
B	T / R ( Reel package )	600 pcs	

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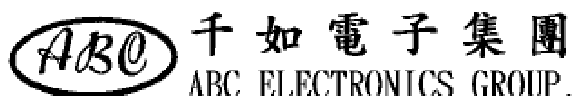
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NAME	POWER INDUCTOR	ABC'S ITEM No.	

**VIII . RELIABILITY TEST :**

Test item	Specification	Test condition						
Solderability	More than 95% of the terminal electrode shall be covered With fresh solder.	Preheat : 155°C / 4 hours. Solder : Sn96.5 / Ag3 / Cu0.5 or equivalent Solder temp. : 235±5°C Flux : Rosin Dip time : 5±0.5 seconds						
Thermal shock test (Temp. cycle)	Electrical characteristics shall not change more than ±20%	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Room temp. 15 minutes</td> <td style="text-align: center;">→</td> <td style="text-align: center;">-55 °C 30 minutes</td> </tr> <tr> <td style="text-align: center;">Room temp. 15 minutes</td> <td style="text-align: center;">→</td> <td style="text-align: center;">+135 °C 30 minutes</td> </tr> </table> <p>Total : 50 cycles</p>	Room temp. 15 minutes	→	-55 °C 30 minutes	Room temp. 15 minutes	→	+135 °C 30 minutes
Room temp. 15 minutes		→	-55 °C 30 minutes					
Room temp. 15 minutes		→	+135 °C 30 minutes					
Humidity Test		Temperature : 40±2°C Humidity : 90±5% Time : 1000 hours						
High temp. Resistance test	Temperature : 135±5°C Applied current : Per spec. Time : 96 hours							

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**IX . UL CARD :**

OBMW2	January 7, 1988	
Component-Magnet Wire		E104048 (S)
MITSUBISHI CABLE INDUSTRIES LTD 4-3 IKEJIRI ITAMI , HYOGO 664 JAPAN		
Mtl Dsg	Coat Typ	ANSI Type
EDW-R52	BC Medis	Oyercoat Ester-imide
		Temp Class 155

Marking : Company name and type designation on package or reels.

See General Information Preceding These Recognitions.

For use only in equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Report : January 5, 1988.

302279005    H7642                      Underwriters Laboratories Inc.®                      D11/0149909

QMFZ2	August 31, 2002	
Plastics-Component		E91944
NIPPON PETROCHEMICALS CO LTD		
Mterial Dsg	Color	Min Thk mm
Liquid Crystal Polyester (LCP), glass filled, furnished as pellets.		
HM-402	NC , BK	0.30
		V-0
		—
		—
		130
		130
		130
		—
		—
		—

(a)-Virgin and Regrind up to 50% have the same basic characteristics.  
r1-Virgin and Regrind from 1 to 50% by weight incl. have the same Flame characteristics, Tensile Impact, Tensile Strength and Heat Deflection in natural color only.  
r2-Virgin and Regrind from 26-50% by weight inclusive for the colors NC, and BK have the same Flame, and Tensile Impact characteristics.  
r3-Virgin and Regrind from 26-50% by weight inclusive have the same Flame and Tensile Impact characteristics.

Marking : Company name or trademark 新日本石油化學株式會社 and material designation on container, wrapper or finished part.

10/15/2002                                      Underwriters Laboratories Inc.                                      Card 8 of 9

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