

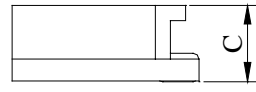
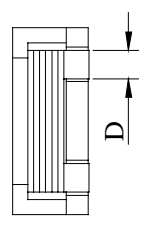
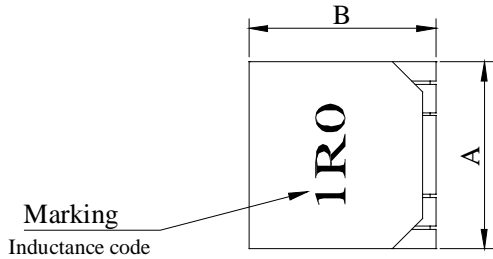
# SPECIFICATION FOR APPROVAL

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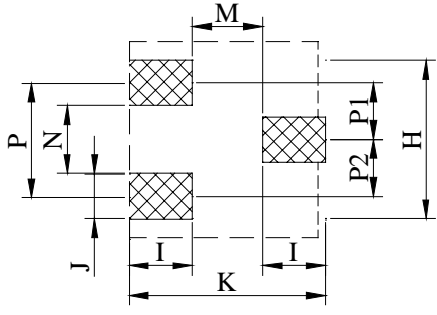
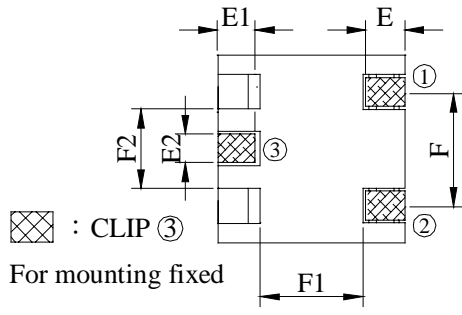
PAGE: 1

PROD. NAME	SHIELDED SMD POWER INDUCTOR	ABC'S DWG NO.	SP1205□□□□L□
		ABC'S ITEM NO.	

## I . MECHANICAL DIMENSIONS :



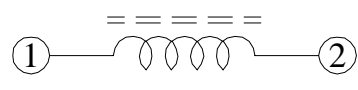
C : R30~1R0 : 5.00 max. m/m  
1R8~7R2 : 5.60 max. m/m



( PCB Pattern )

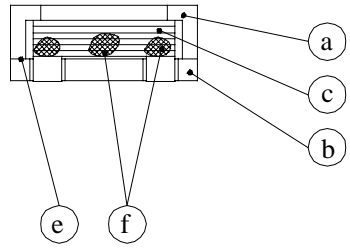
A :	12.50±0.30	m/m
B :	12.50±0.30	m/m
D :	1.90±0.20	m/m
E :	2.50 nom.	m/m
E1:	2.00 ref.	m/m
E2:	2.00 ref.	m/m
F :	7.50±0.25	m/m
F1:	6.40 ref.	m/m
F2:	5.20 ref.	m/m
H :	10.50 ref.	m/m
I :	4.15 ref.	m/m
J :	3.00 ref.	m/m
K :	13.00 ref.	m/m
M :	4.70 ref.	m/m
N :	4.50 ref.	m/m
P :	7.50 ref.	m/m
P1 :	3.75 ref.	m/m
P2 :	3.75 ref.	m/m

## II . SCHEMATIC DIAGRAM :



## III . MATERIALS LIST :

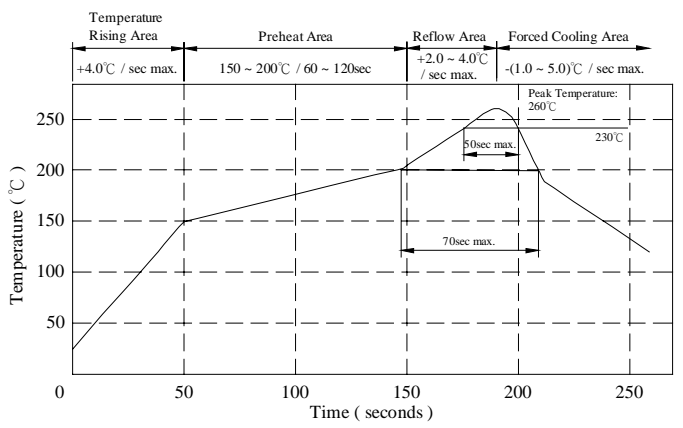
- a . Core : Ferrite ER core
- b . Core : Ferrite SB core
- c . Wire : Ultra-fine rectangular  
Enamelled copper wire ( class F )
- d . Clip : Cu/Sn
- e . Adhesive : Epoxy resin
- f . Adhesive : Epoxy resin
- g . Remark : Lead content 200ppm max.  
include ferrite



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

## IV . GENERAL SPECIFICATION :

- a . Temp. rise : 40°C max.
- b . Storage temp. : -40°C ~ +125°C
- c . Operating temp. : -40°C ~ +105°C
- d . Resistance to solder heat : 260°C. 10 secs.



AE-001A



# SPECIFICATION FOR APPROVAL

REF :

PAGE: 2

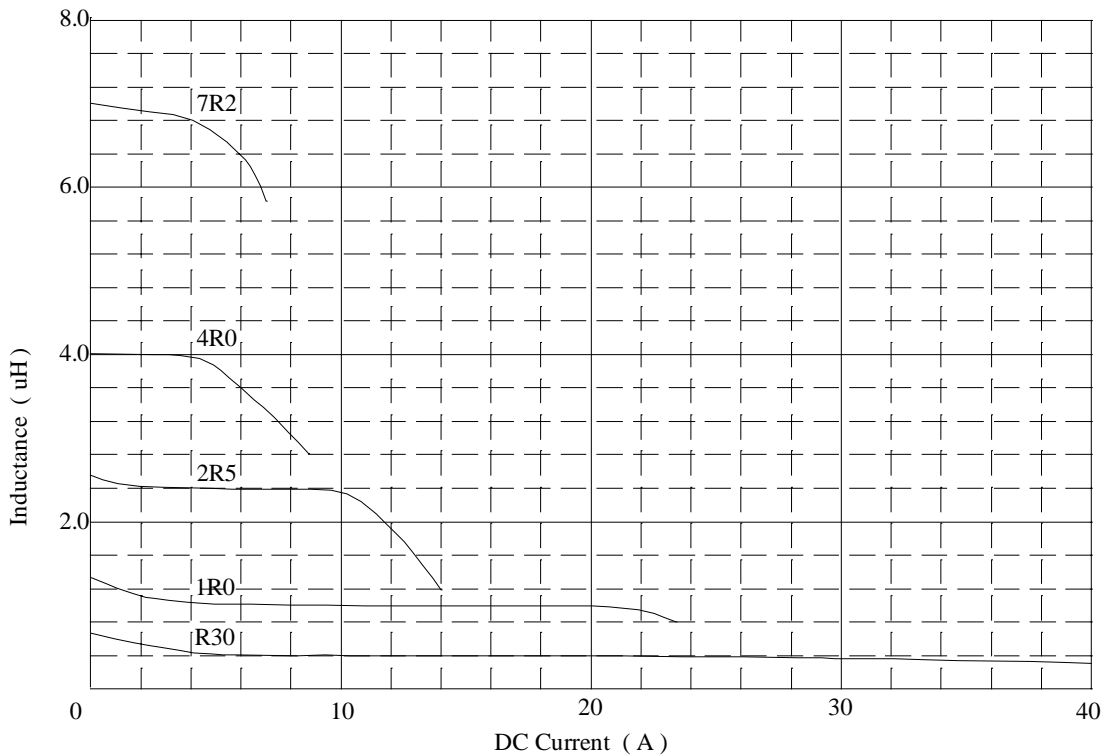
PROD. NAME	SHIELDED SMD POWER INDUCTOR	ABC'S DWG NO.	SP1205□ □ □ □ L□
		ABC'S ITEM NO.	

## V . ELECTRICAL CHARACTERISTICS :

DWG No.	Initial Inductance L0 ( uH )	Inductance at flat point L1 ( uH )	Flat point ref. ( A )	Irms ( A )	Isat ( A )	DC Resistance ( mΩ )	
						max.	typ.
SP1205R30YL□	0.54± 25%	0.30± 25%	5.00	38.0	35.0	1.8	0.8
SP1205R60YL□	0.85± 25%	0.60± 25%	5.00	28.0	27.0	2.5	1.5
SP12051R0YL□	1.25± 25%	1.00± 25%	5.00	23.0	22.0	3.4	2.8
SP12051R8YL□	2.00± 25%	1.80± 25%	2.00	20.0	16.0	3.4	2.5
SP12052R5YL□	2.70± 25%	2.50± 25%	2.00	18.0	12.0	3.4	2.5
SP12053R3YL□	3.50± 25%	3.30± 25%	2.00	16.0	11.8	5.4	4.3
SP12054R0YL□	4.20± 25%	4.00± 25%	3.00	15.0	8.3	5.4	4.3
SP12055R6YL□	5.80± 25%	5.60± 25%	2.00	12.0	8.0	11.4	9.2
SP12057R2YL□	7.40± 25%	7.20± 25%	2.00	10.0	7.5	13.5	10.5

- 1). □ : Packaging Information... **A** Bulk **B** Taping Reel
- 2). Measured frequency of inductance is 100 KHz / 1V
- 3). Isat base on inductance drop 20% typ. of L1 value
- 4). Irms base on temp. rise 40°C max.

@ Inductance VS. DC Superposition Charateristics



AE-001A

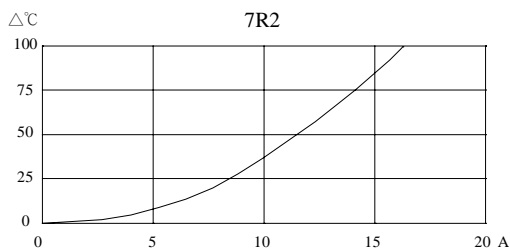
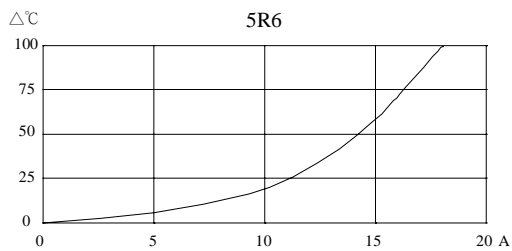
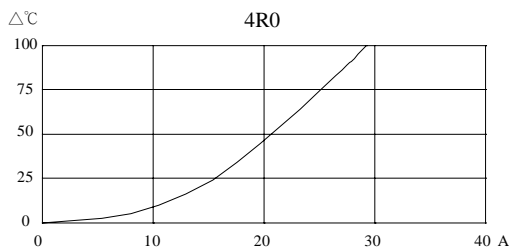
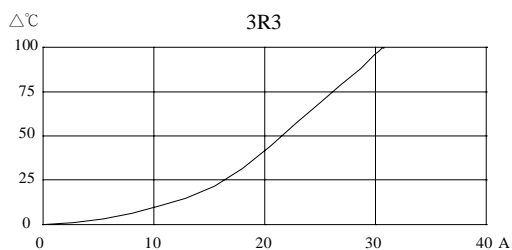
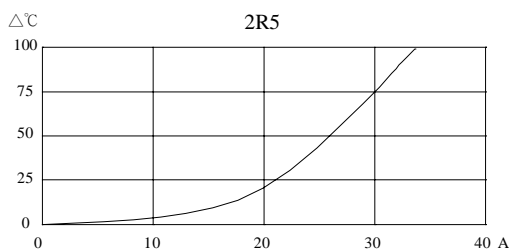
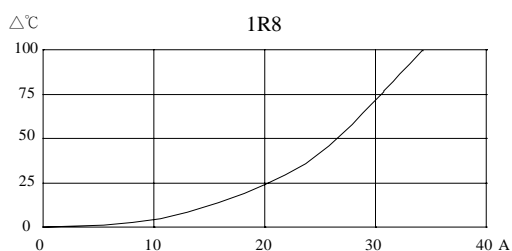
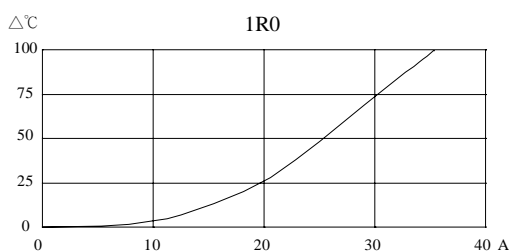
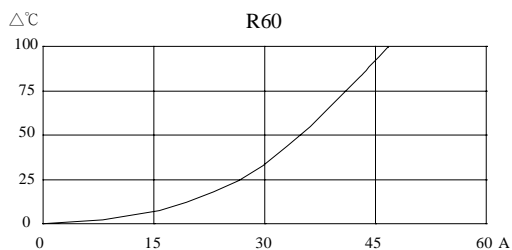
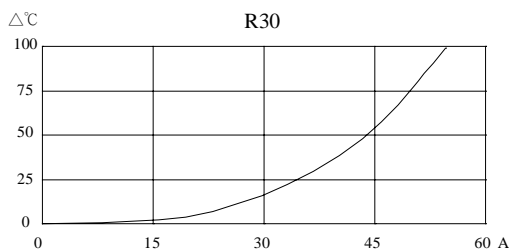
# SPECIFICATION FOR APPROVAL

REF :

PAGE: 3

PROD. NAME	SHIELDED SMD POWER INDUCTOR	ABC'S DWG NO.	SP1205□ □ □ □ L□
		ABC'S ITEM NO.	

@ DC Current VS Temperature Rise



AE-001A



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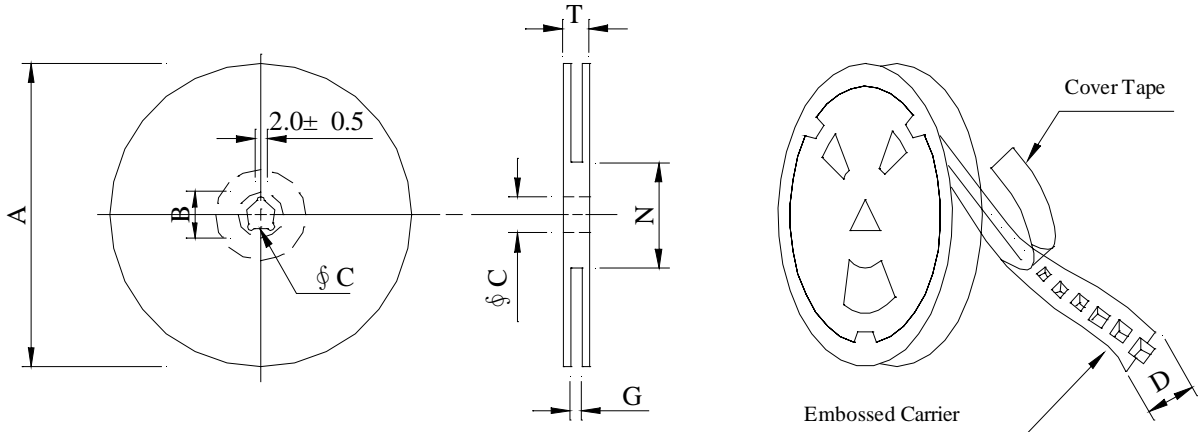
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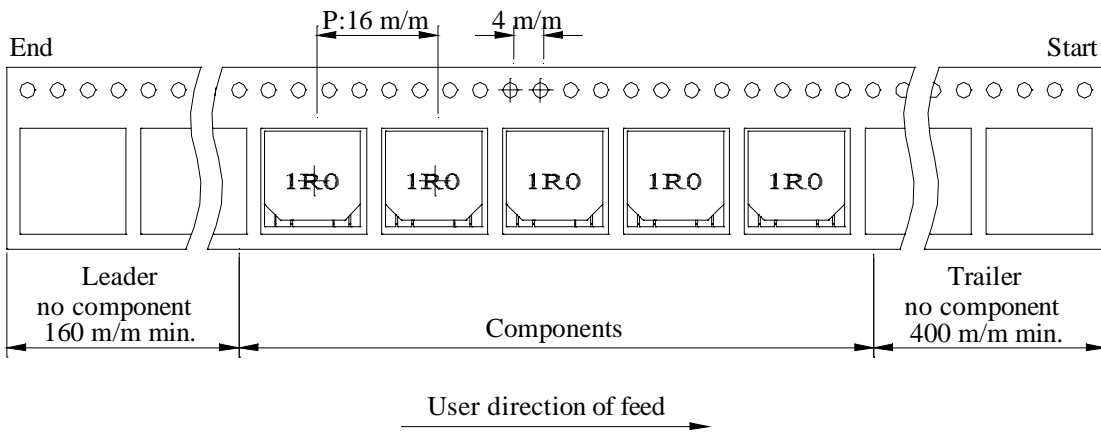
PROD. NAME	SHIELDED SMD POWER INDUCTOR	ABC'S DWG NO.	SP1205□ □ □ □ L□
		ABC'S ITEM NO.	

**VI . 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)
SP1205	600	2,150	13 - 24	2,400	11.30	40 x 40 x 24

AE-001A

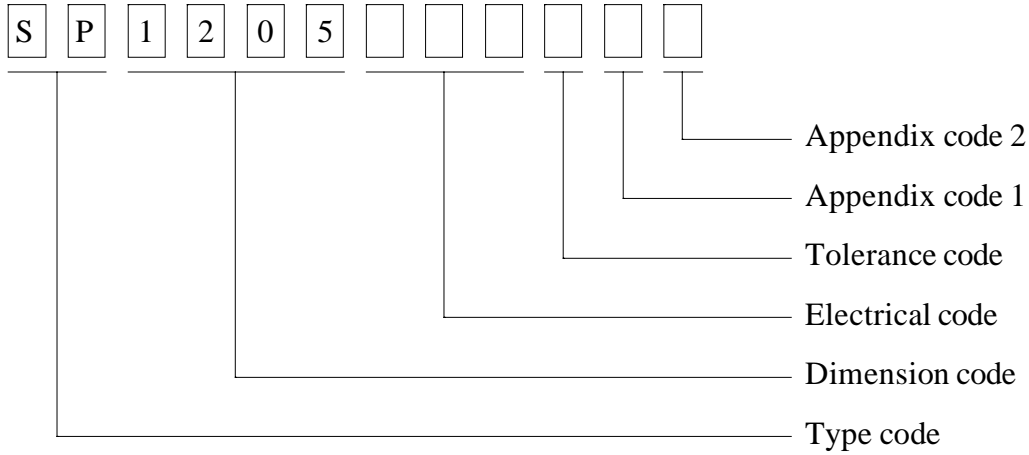
# SPECIFICATION FOR APPROVAL

REF :

PAGE: 5

PROD. NAME	SHIELDED SMD POWER INDUCTOR	ABC'S DWG NO. ABC'S ITEM NO.	SP1205□ □ □ □ L□
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VII . DWG EXPRESSION :



- Appendix code 1 : S : Standard products  
 A~K , M~R , T~Z : Special products  
 L : Standard Lead Free products  
 1 ~ 9 : Special Lead Free products

Appendix code 2 :

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

# SPECIFICATION FOR APPROVAL

REF :

PAGE: 6

PROD. NAME	SHIELDED SMD  POWER INDUCTOR	ABC'S DWG NO.  ABC'S ITEM NO.	SP1205□ □ □ □ L□
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**VIII . RELIABILITY TEST :**

Test item	Specification	Test condition						
Solderability	More than 90% of the terminal electrode shall be covered With fresh solder.	Preheat : 150± 25°C for 60 seconds Solder : Sn96.5 / Ag3 / Cu0.5 or equivalent Solder temp. : 260± 5°C Flux : Rosin Dip time : 4± 1 seconds						
Thermal shock test ( Temp. cycle )	Inductance 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;">—————&gt;</td> <td style="text-align: center;"><u>-25± 2 °C</u> 30 minutes</td> </tr> <tr> <td style="text-align: center;">Room temp. 15 minutes</td> <td style="text-align: center;">—————&gt;</td> <td style="text-align: center;"><u>85± 2 °C</u> 30 minutes</td> </tr> </table> <p>Total : 50 cycles</p>	Room temp. 15 minutes	—————>	<u>-25± 2 °C</u> 30 minutes	Room temp. 15 minutes	—————>	<u>85± 2 °C</u> 30 minutes
Room temp. 15 minutes		—————>	<u>-25± 2 °C</u> 30 minutes					
Room temp. 15 minutes		—————>	<u>85± 2 °C</u> 30 minutes					
Humidity Resistance test		Temperature : 40± 2°C Humidity : 90 ~ 95% Applied current : Per spec. Time : 500 hours						
High temp. Resistance test	Temperature : 105± 2°C Applied current : Per spec. Time : 500 hours							

AE-001A



# SPECIFICATION FOR APPROVAL

REF :

PAGE: 7

PROD. NAME	SHIELDED SMD POWER INDUCTOR	ABC'S DWG NO.	SP1205□ □ □ □ L□
		ABC'S ITEM NO.	

## IX . UL CARD :

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

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AE-001A