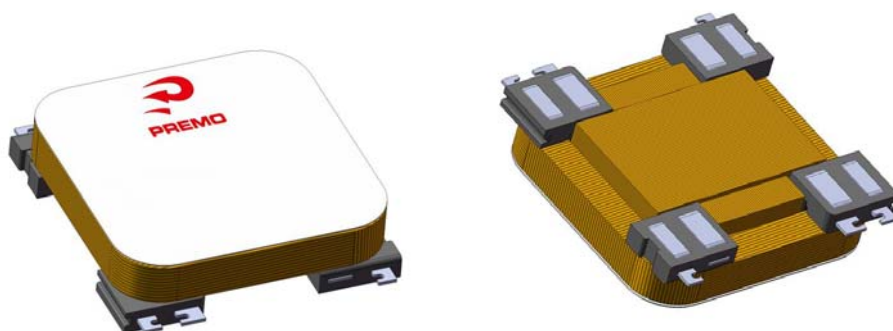


	<b>CUSTOMER</b> STF COMPANY		<b>CUSTOMER CODE</b>		<b>PART DESCRIPTION</b> 3D COIL 11x11LP X, Y, Z: 4.7, 4.7, 6.8mH. isotropic@134 kHz	
	<b>INTERNAL CODE</b> X-D0725-0003		<b>DATE</b> 14/05/2008	<b>EDITION</b> 2	<b>DOCUMENT NAME</b> E07250003_2.doc	<b>PAGE</b> 1/8

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## **3DCOIL 11x11 Low Profile 11.6/13/3 mm. 4.7 mH, 4.7 mH, 6.8 mH @134 kHz**

### **NOTES**

Critical characteristics marked with (\*)

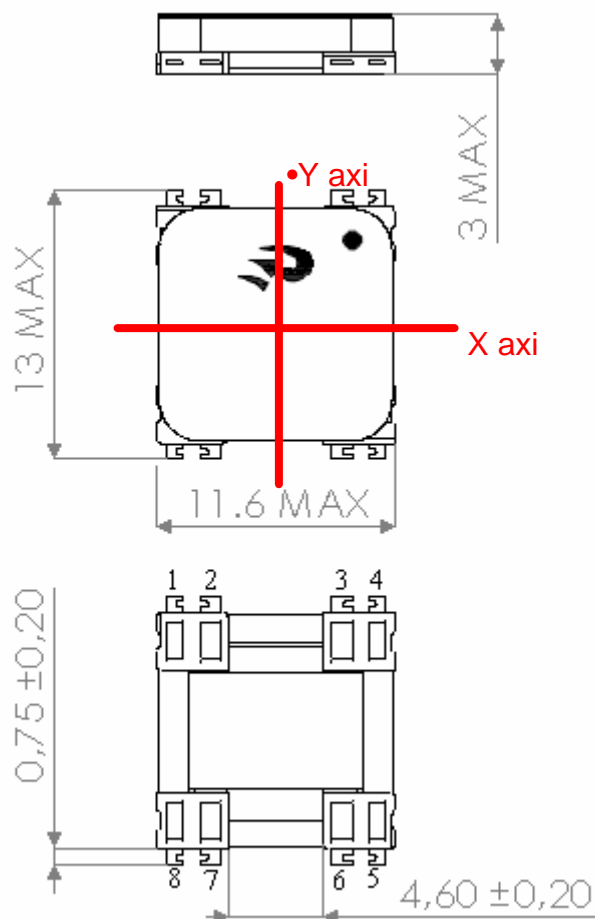
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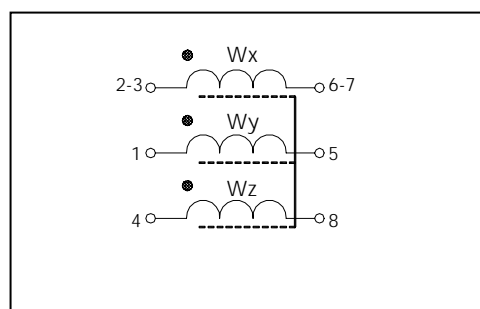
	<b>CUSTOMER</b> STF COMPANY		<b>CUSTOMER CODE</b>		<b>PART DESCRIPTION</b> 3D COIL 11x11LP X, Y, Z: 4.7, 4.7, 6.8mH. isotropic@134 kHz	
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## 1.- DIMENSIONS AND PINS CONFIGURATION



All dimensions are in mm.



### NOTES

Critical characteristics marked with (\*)

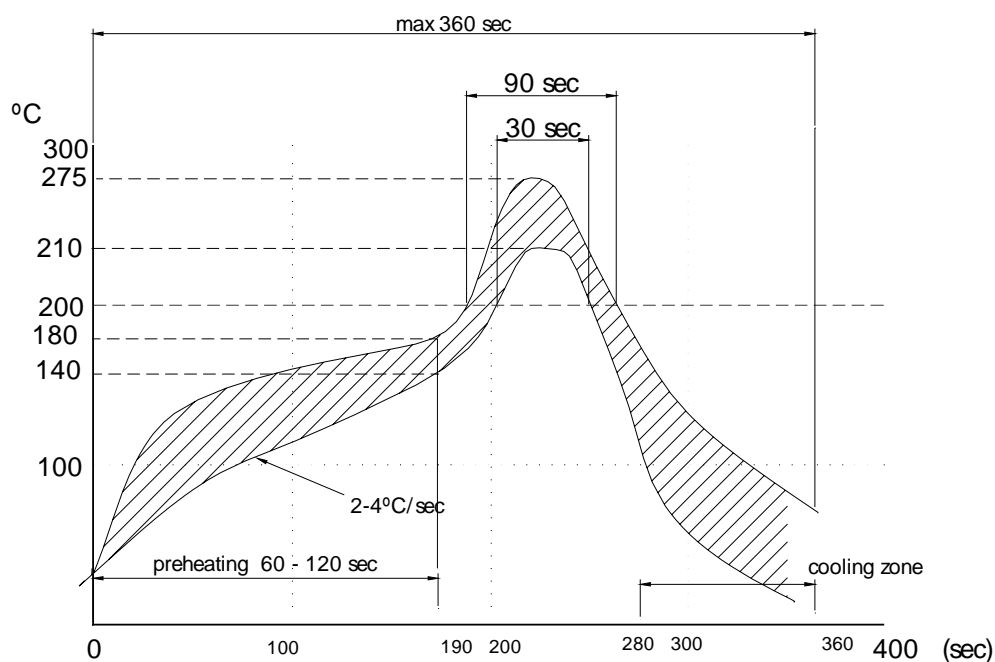
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	<b>CUSTOMER</b> STF COMPANY		<b>CUSTOMER CODE</b>		<b>PART DESCRIPTION</b> 3D COIL 11x11LP X, Y, Z: 4.7, 4.7, 6.8mH. isotropic@134 kHz	
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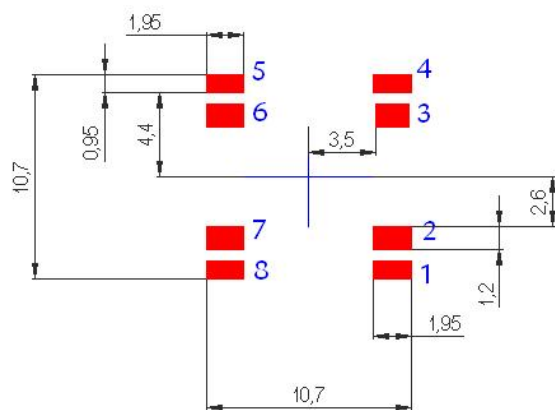
## 2.- SOLDERING

### 2.1.- RECOMMENDED REFLOW PROFILE



The reflow condition recommended above is according to the machine used by our company. Big differences will arise as a result of the type of machine, reflow conditions, method, etc used.

### 2.2.- RECOMMENDED PAD LAYOUT



All dimensions are in mm.

#### NOTES

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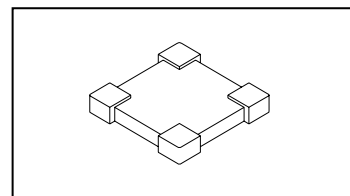
### 3.- MATERIALS

#### 3.1.- FERRITE CORE MATERIAL

Initial permeability  $\mu_i$ : 1000 (at 25 °C, <10 kHz)

$T_c \geq 100$  °C.

$B_s$ :  $\approx 320$  mT (at 25°C).

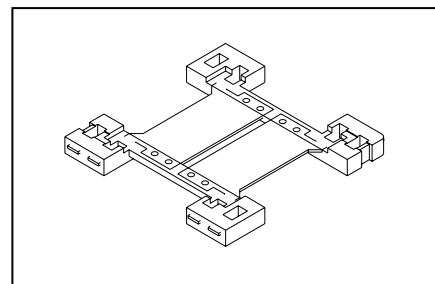


#### 3.2.- SMD BASE (LEADFRAME)

Plastic material: LCP E4008.

Tinned terminals: 0.25 mm total thickness.

Base material CuSn6 (Phosphor Bronze), 2-3  $\mu$ m Cu  
4-6  $\mu$ m Sn100 (finish layer)



#### 3.3.- WIRE

Selfbonding wire with modified Polyurethane MSB180, isolation Grade 1B; norms IEC 317-35, IEC 317-2.

Enamelled wire with modified Polyurethane P180, isolation Grade 1; norms IEC 317-20, MW79.

Diameters : 0.048 mm and 0.060 mm.

#### 3.4.- ADHESIVE to join ferrite to plastic base

Epoxy based adhesive

#### 3.5.- LABEL

Acrylate material

#### NOTES

Critical characteristics marked with (\*)

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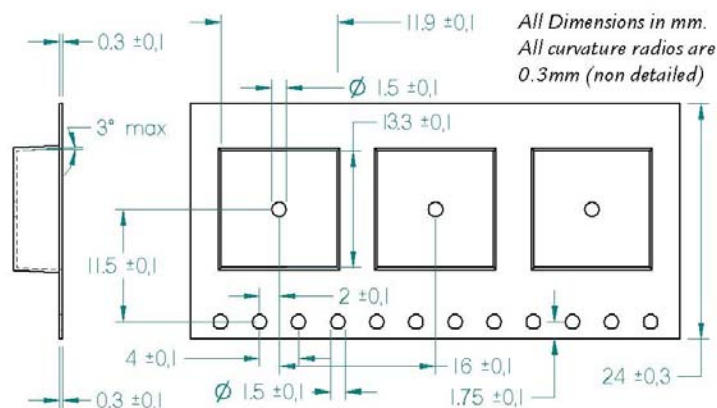


	CUSTOMER STF COMPANY		CUSTOMER CODE		PART DESCRIPTION 3D COIL 11x11LP X, Y, Z: 4.7, 4.7, 6.8mH. isotropic@134 kHz	
	INTERNAL CODE X-D0725-0003	DATE 14/05/2008	EDITION 2	DOCUMENT NAME E07250003_2.doc		PAGE 5/8

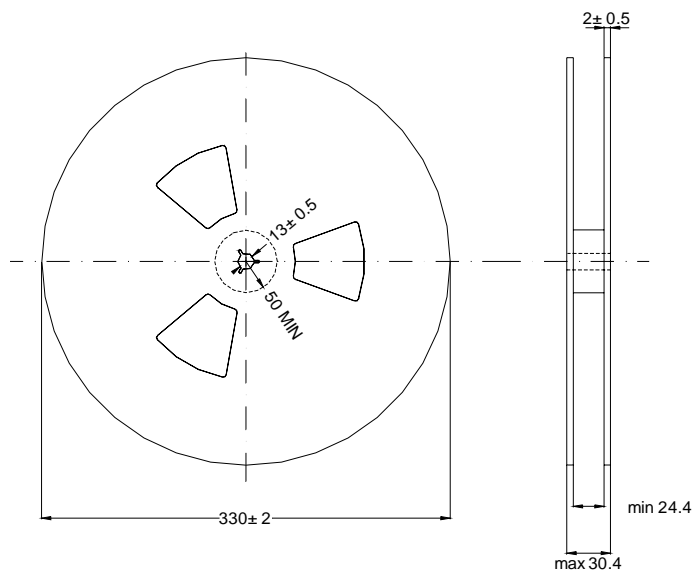
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## 4.- PACKAGING AND LABELLING

### 4.1.- TAPING SPECIFICATION (According to EIA481)



### 4.2.- REEL



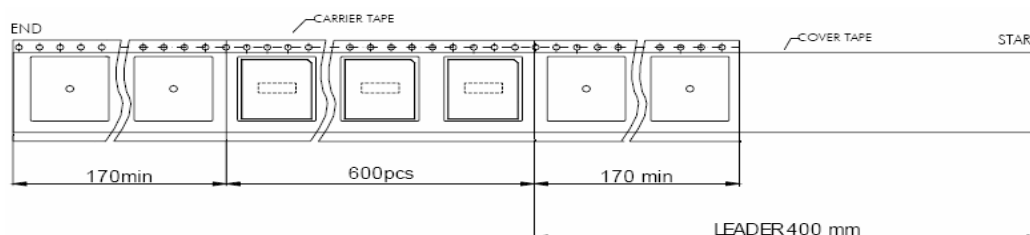
#### PARTS PER REEL

7"
600

#### MATERIAL LIST

ITEM	MATERIAL
Reel	SHOCK-PROOF POLYSTYROL
Carrier tape	PC brown color antistatic 0.3 mm
Cover tape	POLYESTER with ANTISTATIC

### 4.3. TAPING



#### NOTES

Critical characteristics marked with (\*)

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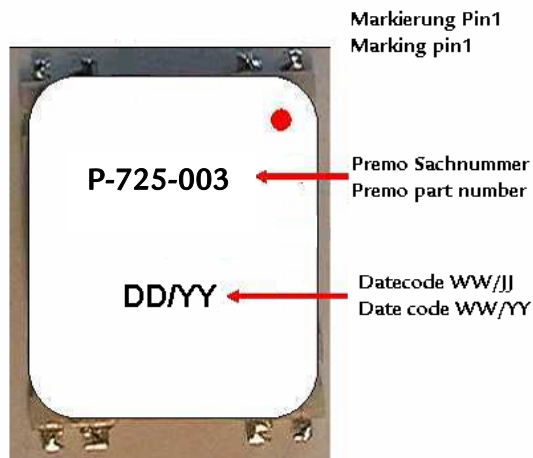
RoHS  
COMPLIANT  
2002/95/EC

	<b>CUSTOMER</b> STF COMPANY		<b>CUSTOMER CODE</b>		<b>PART DESCRIPTION</b> 3D COIL 11x11LP X, Y, Z: 4.7, 4.7, 6.8mH. isotropic@134 kHz	
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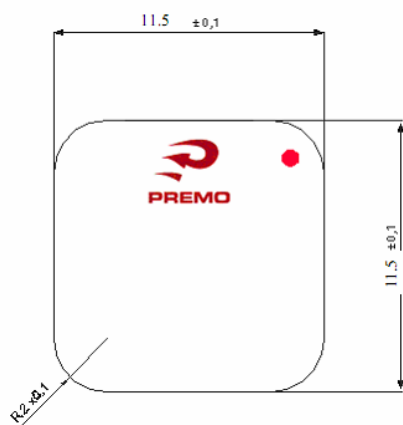
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#### 4.4. LABELLING

The Labelling will be according to the following Figures:



Label dimensions have to fully cover the top part of the Z winding:



#### NOTES

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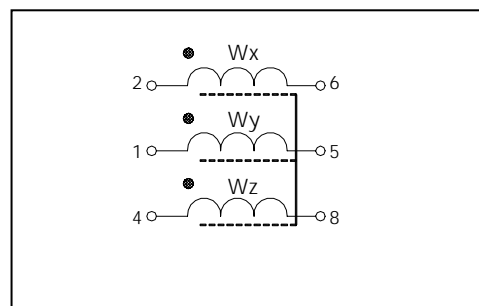
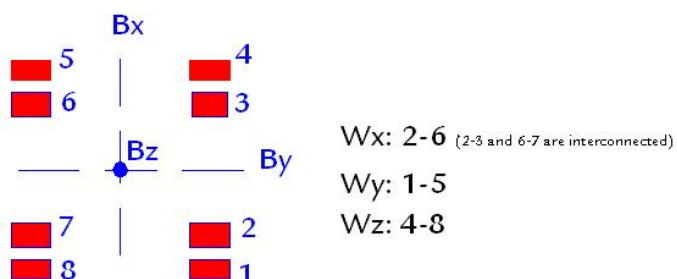
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## 5.- ELECTRICAL CHARACTERISTICS OF THE PART

X Winding			
Wire $\Phi_{Cu}$ (mm)	Number of turns in the winding	@134 kHz, 1 Vac, 25 °C	
0.048 P180	416 <sub>typ</sub>	L (mH) (*)	Q (*)
Rdc ( $\Omega$ )	SRF (kHz) @ 1Vac, 25 °C	4.7 $\pm$ 5%	> 18.5
85 $\pm$ 10%	> 330		
Sensitivity (mV <sub>rms</sub> /A <sub>rms</sub> /m) @ 125 kHz			
> 75			

Y Winding			
Wire $\Phi_{Cu}$ (mm)	Number of turns in the winding	@134 kHz, 1 Vac, 25 °C	
0.048 P180	432 <sub>typ</sub>	L (mH) (*)	Q (*)
Rdc ( $\Omega$ )	SRF (kHz) @ 1Vac, 25 °C	4.7 $\pm$ 5%	> 18.5
90 $\pm$ 10%	> 330		
Sensitivity (mV <sub>rms</sub> /A <sub>rms</sub> /m) @ 125 kHz			
> 75			

Z Winding			
Wire $\Phi_{Cu}$ (mm)	Number of turns in the winding	@134 kHz, 1 Vac, 25 °C	
0.060 B155	560 <sub>typ</sub>	L (mH) (*)	Q (*)
Rdc ( $\Omega$ )	SRF (kHz) @ 1Vac, 25 °C	6.8 $\pm$ 5%	> 24
140 $\pm$ 10%	> 700		
Sensitivity (mV <sub>rms</sub> /A <sub>rms</sub> /m) @ 125 kHz			
> 80			



Inductance, Q factor, R<sub>dc</sub> and SRF measured with an LCR meter Wayne Kerr PMA 3260A

Sensitivity measured with Helmholtz coils 5 turns, 166 mm  $\Phi$  (contact PREDAN for measurement specifications)

NOTES
Critical characteristics marked with (*)
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## 6.- FUNCTIONAL PERFORMANCE

The qualification plan of the piece will follow the AEC-Q200 revision C.

### 6.1.- OPERATING-STORAGE TEMPERATURE

The operating temperature range is fixed between -40 °C and +85 °C.

The storage temperature range is fixed between -40 °C and +85 °C.

## 7.- EDITION CONTROL

Edition	Date	Change description	Made by
1 <sup>st</sup>	31/08/07	Preliminary edition 3DC11X11LP	Federico Martin
2 <sup>nd</sup>	14/05/08	Updated design according to last samples sent and tested by customer (XD10335-002)	MM. Villarrubia

### NOTES

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