

承 认 书

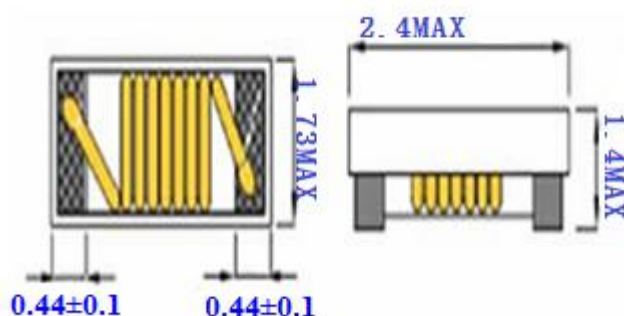
SPECIFICATION FOR APPROVAL

CUSTOMER:			
CUSTOMER P/N:			
Cybermax P/N:	CMCW2012F150KTT		
DRAWN NO. :	CM190705001		
DATE:	19.07.05	REVISION NO.	A
Signature:			
APPROVED BY	CHECKED BY	DRAWN BY	
 黄 19.07.05 大燕	 谢 19.07.05 焕飞	 申 19.07.05 双凤	
 cybermax cybermaxtech.com		 RoHS Compliance	

[illegible]

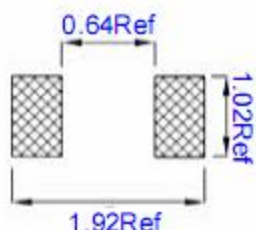
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SHAPE & DIMENSION (UNIT:mm)



Marking Code: Size: Color: typeface:

PAD LAYOUT(MM):



ELECREICAL SCHEMATIC:

ELECREICAL SPECIFICATION

MEAS. ITEM	SPEC.				TEST FREQ.	CONDITIONS
L	15	μH	$\pm$	10%	2.5MHz/0.1V	$T_a=25^\circ\text{C}$, $I_{dc}=0\text{A}$
DCR	1.4	Ω	$\pm$	30%		$T_a=25^\circ\text{C}$
Isat	0.3A MAX(0.34A TYP)				2.5MHz/0.1V	$\Delta L/L \leq 30\%$
Irms	0.38A MAX(0.48A TYP)				2.5MHz/0.1V	$\Delta T \leq 40^\circ\text{C}$

GENERAL SPECIFICATION

Electrical specifications :	at 25°C
Operation Temperature:	$-40 \sim +125^\circ\text{C}$
Storage Temperature:	$-40 \sim +125^\circ\text{C}$
(1) WIRE TYPE: $\phi 0.05\text{mm}$	
(2) WINDING: 50.5Ts(Ref.)	

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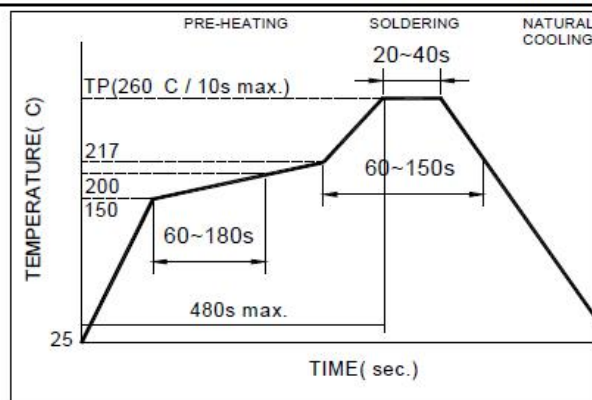
Reliability Test

No.	Item	Specification	Test Method
1	Temperature Shock.	Appearance: No damage. Inductance: within $\pm 10\%$ of initial.	Temperature: $-25 \pm 2^{\circ}\text{C} \sim +105 \pm 2^{\circ}\text{C}$ Kept for 30 minutes. Transition time : 5 minutes. 100 Cycles.
2	Humidity Resistance.	Appearance: No damage. Inductance: within $\pm 10\%$ of initial.	Temperature: $40 \pm 2^{\circ}\text{C}$. Relative Humidity: 90%. Duration: 500 +4/-0 hours.
3	High Temperature Resistance.	Appearance: No damage. Inductance: within $\pm 10\%$ of initial.	Temperature: $105 \pm 2^{\circ}\text{C}$. Duration: 1000 +4/-0 hours.
4	Low Temperature Resistance.	Appearance: No damage. Inductance: within $\pm 10\%$ of initial.	Temperature: $-25 \pm 2^{\circ}\text{C}$. Duration: 1000 +4/-0 hours.
5	Vibration test.	Appearance: No damage. Inductance: within $\pm 10\%$ of initial.	Oscillation Frequency: 10Hz to 55Hz to 10Hz in 60 seconds as a period. Total amplitude: 1.5mm. Testing Time: a period of 2 hours in each 3 mutually perpendicular directions (total of 6 hours).
6	Solderability Heat test.	Appearance: No damage. Inductance: within $\pm 10\%$ of initial.	Solder temperature: $260 \pm 5^{\circ}\text{C}$. Duration: 5 sec. Allowed reflow time: 2 times.
7	Solderability test.	90% or more of electrode area shall be coated by new solder.	Preheating: 160°C , 60sec. Solder temperature: $245 \pm 5^{\circ}\text{C}$. Duration : 5 sec.
8	Flexure Strength.	No visible mechanical damage.	Flexure: 2mm. Pressurizing Speed: 0.5mm/sec. Keep time: 30 ± 1 sec.
9	Terminal Strength.	No visible mechanical damage.	Force: 0.45Kg for 0603 series. Force: 0.9Kg for 0805 series. Force: 1.8Kg for 1008 series above. Keep time: 5 sec, X,Y directs.

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SOLDERING CONDITIONS

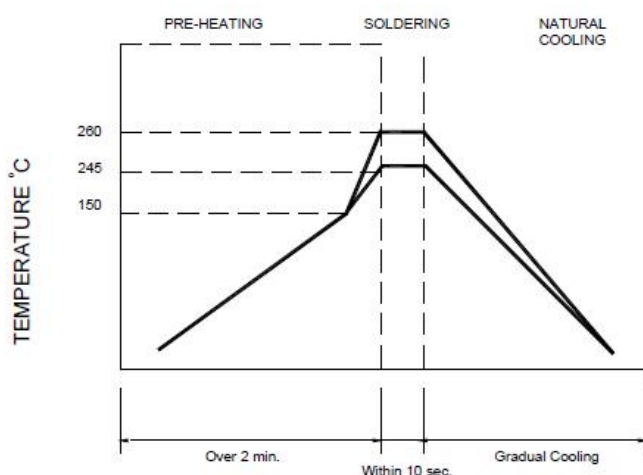
**Figure 1.
Re-flow
Soldering (Lead
Free)**



Note:

- Preheat circuit and products to 150°C
- 260°C tip temperature (max)

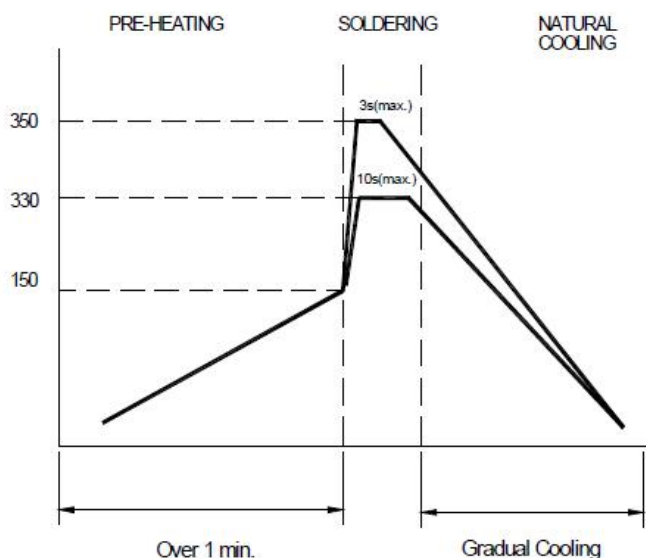
**Figure 2.
Wave Soldering**



Note :

- Never contact the ceramic with the iron tip
- 1.0mm tip diameter (max)

**Figure 3.
Hand Soldering**



Note:

- Use a 20 watt soldering iron with tip diameter of 1.0mm
- Limit soldering time to 3 sec.

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B.O.M

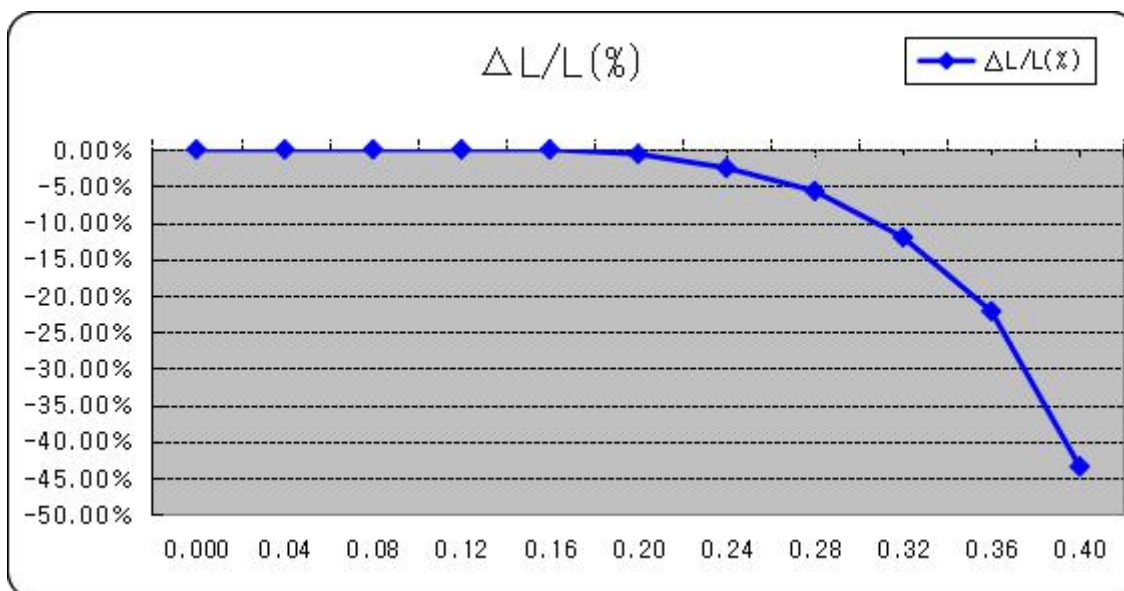
项目名称	型号及规格	制造商	环保要求	备注
磁芯 (DRUM CORE)	MF401 SWI2012C075-LS	台湾佳叶/台湾光绅	RoHS	主选
线材 (WIRE)	P180G1-0.05mm	益利素勒	RoHS	主选
胶水 (GLUE)	UW-523	贺盛	RoHS	灌封

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Isat(飽和電流):電感瞬間的突波電流

CMCW2012F150KTT

TME(秒)	Lsat(A)	L(UH)	$\Delta L/L(\%)$
1	0.000	15.80	0.00%
1	0.04	15.80	0.00%
1	0.08	15.80	0.00%
1	0.12	15.80	0.00%
1	0.16	15.80	0.00%
1	0.20	15.70	-0.63%
1	0.24	15.40	-2.53%
1	0.28	14.90	-5.70%
1	0.32	13.90	-12.03%
1	0.36	12.30	-22.15%
1	0.40	8.94	-43.42%



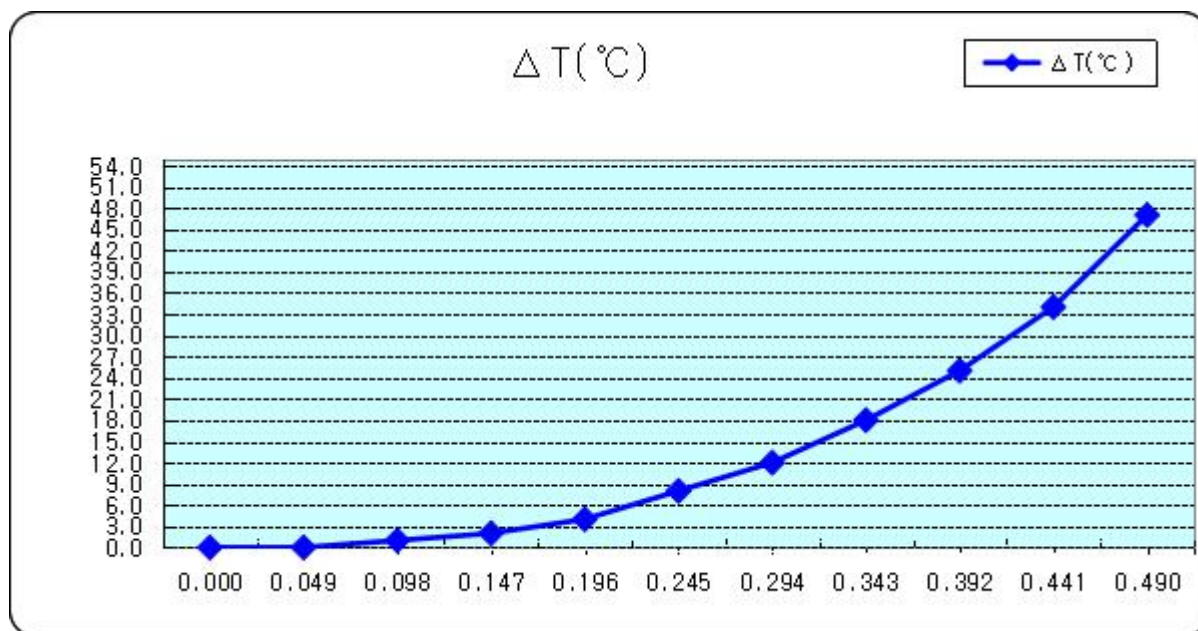
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CMCW2012F150KTT

TIME(S)	Irms(A)	L(uH)	$\Delta L/L(\%)$	Temp(°C)	$\Delta T(^{\circ}C)$
30	0.000	15.60	0.00%	30.0	0.0
30	0.049	15.60	0.00%	30.0	0.0
30	0.098	15.60	0.00%	31.0	1.0
30	0.147	15.50	-0.64%	32.0	2.0
30	0.196	15.30	-1.92%	34.0	4.0
30	0.245	14.90	-4.49%	38.0	8.0
30	0.294	14.20	-8.97%	42.0	12.0
30	0.343	12.50	-19.87%	48.0	18.0
30	0.392	8.76	-43.85%	55.0	25.0
30	0.441	4.26	-72.69%	64.0	34.0
30	0.490	2.86	-81.67%	77.0	47.0

※DC bias current characteristics in the ambient temperature 25°C Frequency 2.5MHz/0.1V



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TEST DATA FOR PREPRODUCTION SAMPLE

TEST RESOLUTION					DIMENSION (Unit: mm)		
MEAS.	L	D.C.R			长	宽	高
ITEM	μH	Ω			mm	mm	mm
SPEC.	15	1.4			Max.2.4	Max.1.73	1.3±0.1
	±	±					
	10%	30%					
TEST FREQ.	2.5MHz/0.1V		Isat 0.3A	△L/L≤30%			
1	15.4	1.57	14.2	-7.8%	2.21	1.44	1.17
2	15.2	1.58	14.1	-7.2%	2.19	1.48	1.16
3	16.0	1.52	14.6	-8.8%	2.15	1.45	1.31
4	15.3	1.52	14.5	-5.2%	2.24	1.64	1.29
5	15.4	1.59	13.9	-9.7%	2.28	1.62	1.24
6	15.7	1.54	14.5	-7.6%			
7	15.8	1.52	13.7	-13.3%			
8	15.2	1.59	14.2	-6.6%			
9	16.2	1.56	14.6	-9.9%			
10	15.4	1.58	14.2	-7.8%			
AVG.	15.560	1.6	14.250	-8.39%			
R	1	0.07	1.60	-4.20%			

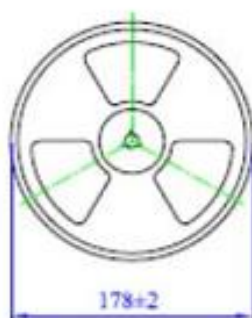
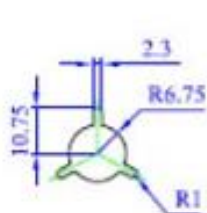
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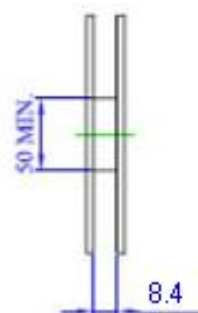
PACKAGING

热封包装

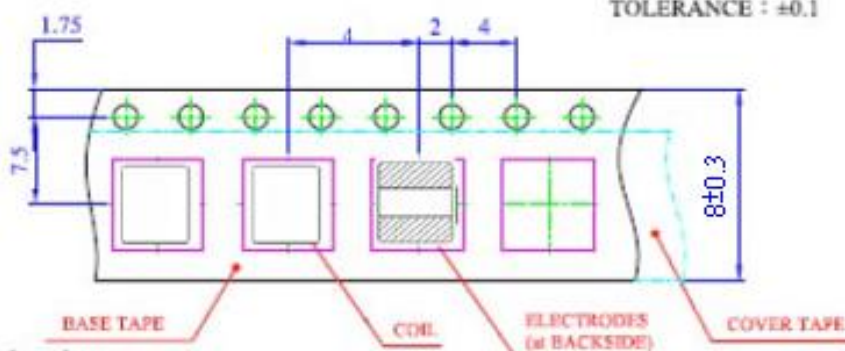
Reel dimensions



UNIT : mm



Tape dimensions



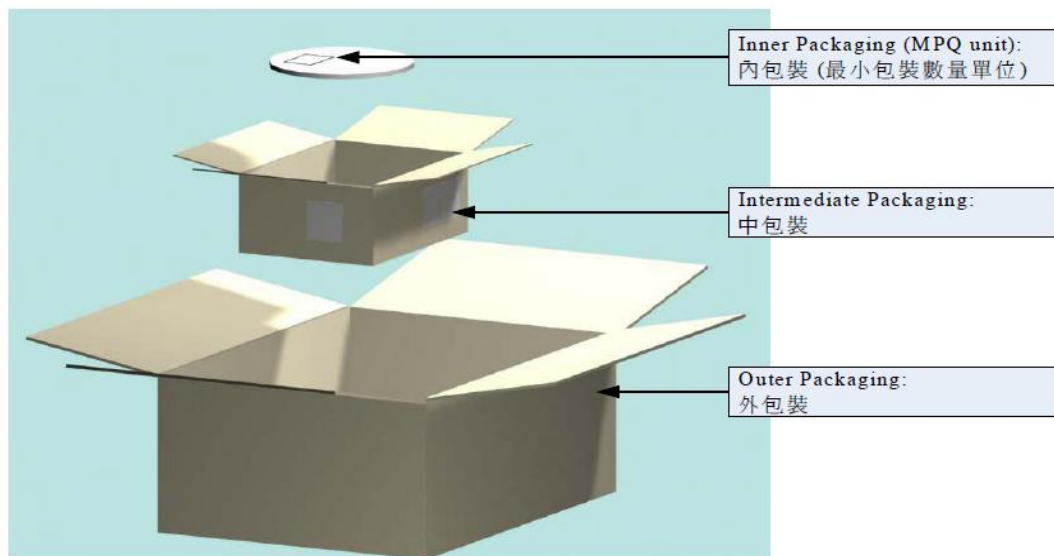
UNIT : mm
TOLERANCE : ±0.1

Packaging

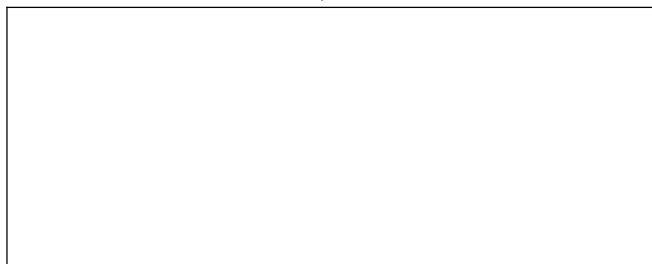
Quantity : **2000** pcs/reel

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PACKAGING



- 1.1 外箱: 39*38*18.5 cm 一箱裝 8 內箱
 - 1.2 內箱: 18.7*18.4*8.3 cm 一箱裝 5 卷制品
 - 1.3 外箱材質: A 三 A
 - 1.4 內箱材質: A=A
 - 1.5 每 5 卷制品用一只静电袋包裝
 - 1.6 每一静电袋內放一只袋干燥剂
 - 1.7 每一卷上面依标签样式的要求贴上标签明细
 - 1.8 出货内外箱贴上该箱內实际內容明细
 - 1.9 出货标签规格如下: 尺寸=长度:39mm 宽度:29mm
- (如: 客戶有特殊要求時, 則依客戶要求實施.)



备注: 如果捆包数量小于内箱捆包数量时就用内箱包裝