

產品規格書  
PRODUCT SPEBWSIFICATION

客戶名稱

CUSTOMER

宏業產品系列

PRODUCT SERIES

宏業規格型號

ECF 4532F-SERIES

PRODUCT TYPE

客戶型號規格

CUSTOMER'S PRODUCT TYPE

研發	品質	業務	批准

深圳市宏業興電子有限公司 SHENZHEN HONGYEK ELEBWSTRONICS CO.,LTD.

傳真 FaK number: 0755-83295141

郵箱 EBWSail: hy@hongyeK.com

公司地址: 廣東省深圳市福田區深南中路佳和大廈 A 座 23 層

Company address: 23/F,Block A,Jiahe building,Shenzhen Cty,Guangdong Province,China

工廠地址: 惠州市羅陽鎮鴻達工業區五號宏業興工業園

Factory address:HongyeKing Industrial Park, No.5, Hongda Industrial Zone,Luoyang Town,Huizhou Cty,Guangdong Province,China

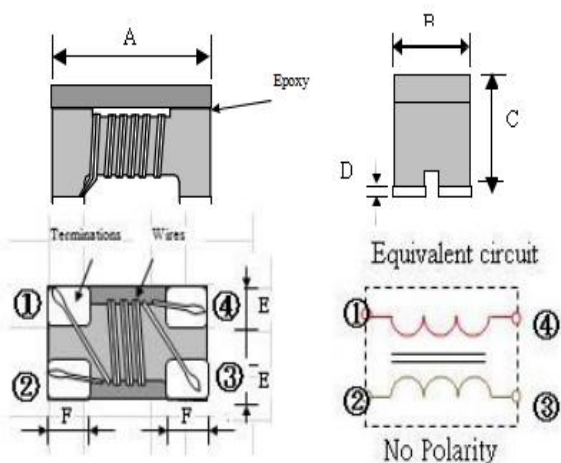
備註 REBWSARK:ECF 4532F-SERIES

客戶回簽 CUSTOMER APPROVAL

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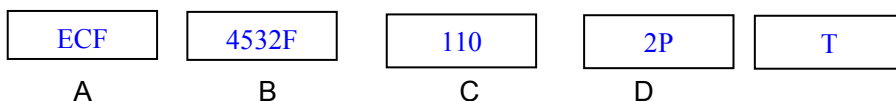
序 號 NO.	修改日期 DATE	修改內容 CHANGE CONTENT	版本號 Version NO.
1	2021/8/16	新發行	A1

## 一. DIMENSION (UNIT: mm)



ECF4532	Dimensions
A	4.5 ± 0.2
B	3.2 ± 0.2
C	2.8 ± 0.2
D	0.2 ± 0.1
E	1.2Typ.
F	1.0Typ.

## 二. Part Numbering



A: Product name

B: Dimension

C: Inductance Value(typ.)

D: 2-Line

E: Taping style

## 三. Specification

P/N	L(μH)	DCR (Ω)	Idc(mA)	Rated Voltage	Insulation Resistance
	Common Mode				
	Inductance at 100KHz	[ Max ]	[ Max ]	Vdc (V)Typical	IR (MΩ)Min.
ECF4532F-110-2P-T	(+50%/-30%)	0.60	250	50	10
	11				
ECF4532F-220-2P-T	(+50%/-30%)	1.00	200	50	10
	22				
ECF4532F-510-2P-T	(+50%/-30%)	1.00	200	50	10
	51				
ECF4532F-101-2P-T	(+50%/-30%)	3.00	150	50	10
	100				
ECF4532F-201-2P-T	(+50%/-30%)	4.50	100	50	10
	200				

AEC-Q200 Grade 1 qualified

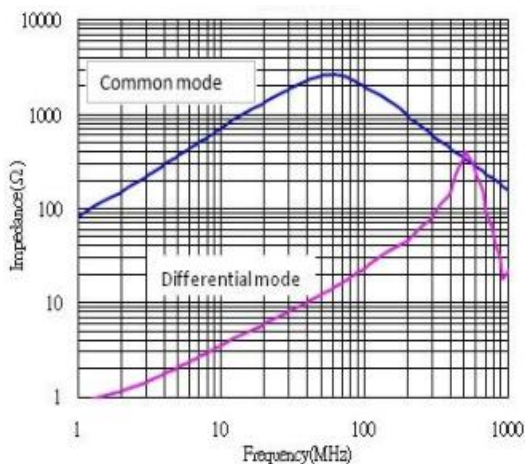
Operating temperature : -40 to +125°C

Storage temp. and humidity : -25 to +85°C ,70%RH max

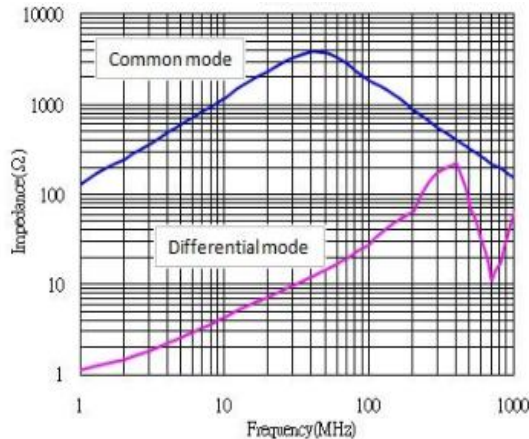
If Use Wave soldering is there will be some risk. Re-flow soldering temperatures below 240 degrees, there will be unwitting risk.

四.PERFORMANCE CURVES

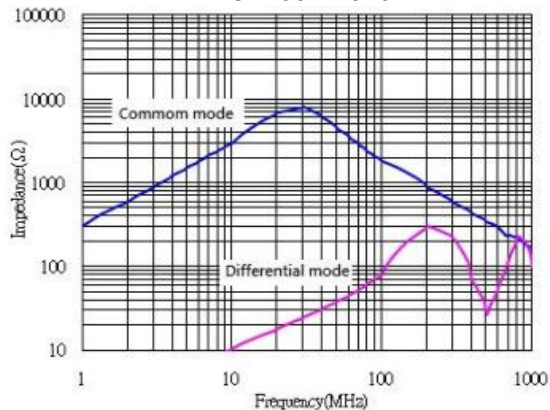
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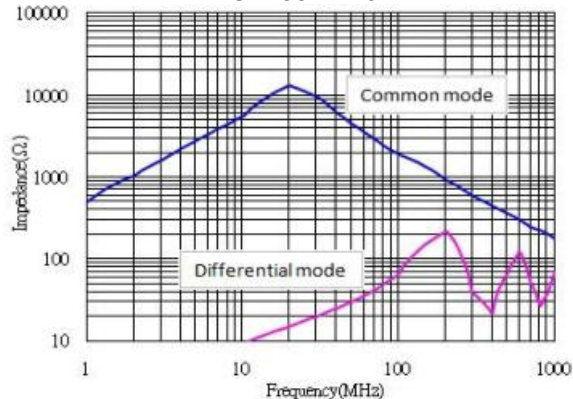
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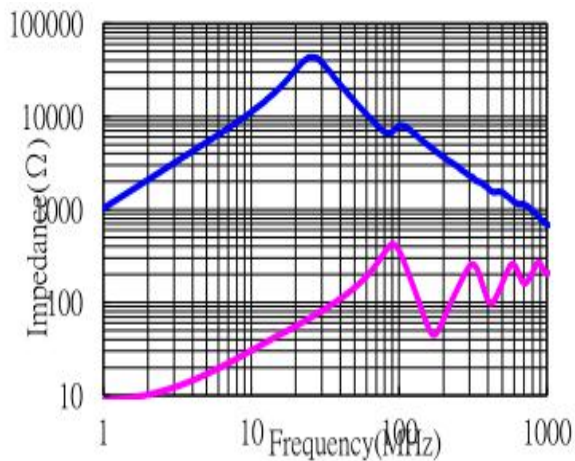
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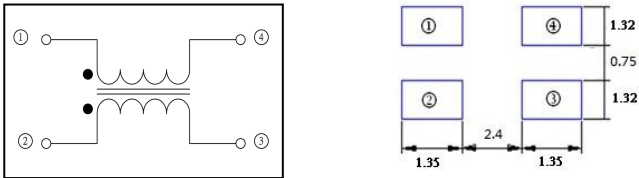
ECF4532F-101-2P-T



ECF4532F-201-2P-T



五. Equivalent Circuit & Recommended Footprint

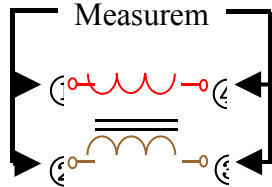


六. Test Equipment

Impedance

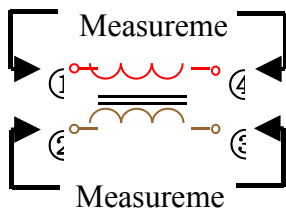
Inductance/Measured by using Agilent 4291A RF Impedance Analyzer.

Measured by using Microtest 6377 LCR METER.



DC Resistance

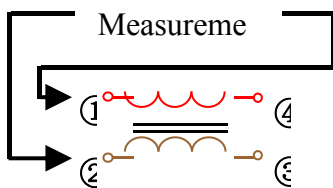
Measured by using Chroma 16502 mill ohm meter.



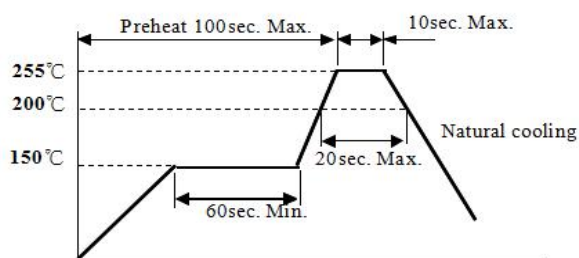
Insulation Resistance

Measured by using Chroma 19073

Measurement voltage : 50v ,Measurement time : 60 sec.



七. RECOMMENDED SOLDERING TEMP. GRAPH



八. Reliability and Test Condition

Test item	Test condition / Test method	SpecCfication
Resistance to soldering heat	Solder: Sn99.5%-Cu0.5% Solder temperature: 260+5/-0°C。 Equipment: KUNG CHENG 錫爐 5” 400°C 、 RF LCR METER。 Flux for lead free: Rosin. 9.5%。 Dip time: 10±0.5sec. Within: 1.5mm。 Magnification 10X。 Test the quantity: 30pcs。	Appearance : Cracking , chipping and any other defects harmful to the characteristics should not be allowed。 L: Within ±10% of initial value。
Solder-ability Test	Preheat: 150°C,60sec.。 Solder: Sn99.5%-Cu0. 5%。 Solder temperature: 245±5°C。 Equipment: KUNG CHENG 錫爐 5” 400°C。 Flux for lead free: Rosin. 9.5%。 Dip time: 4±1sec. Within: 19~31mm。 Magnification 50X。 Test the quantity: 50pcs。	Appearance : More than 95% of the terminal electrode should be covered with solder。
Temperature Cycling Test	-40 +0/-2 °C ,+ 125 +2/-0 °C Kept for , 30 minutes each,1000 cycles, Transfer Time: 5 minutes . Equipment : 高新 TH-1S-C 、 RF LCR METER。 Test the quantity: 90pcs。	Appearance: Cracking, chipping and any other defects harmful to the characteristics should not be allowed。 L: Within ±10% of initial value。
Humidity Resistance Test	85~90% R.H.*25~65 +2/-0°C , *10 Cycles Equipment : 高新 TH-1S-C 、 RF LCR METER Test the quantity: 90pcs。 Rated Current 100%	Appearance: Cracking, chipping and any other defects harmful to the characteristics should not be allowed。 L: Within ±10% of initial value。
Thermal Shock Test	CONDITION(Air-to-air): -40 +0/-2 °C ,+ 125 +2/-0 °C Kept for 15 minutes each,300 cycles,ransfer Time: 20 seconds Equipment : 高新 TH-1S-C 、 RF LCR METER Test the quantity: 90pcs。	Appearance: Cracking, chipping and any other defects harmful to the characteristics should not be allowed。 L: Within ±10% of initial value。

High Temperature Exposure	<p>125 +0/-2℃ *1000±12HRs            Equipment：高新 TH-1S-C、RF LCR METER            Test the quantity: 90pcs。</p>	<p>Appearance: Cracking, chipping and any other defects harmful to the characteristics should not be allowed。            L: Within ±10% of initial value。</p>
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Biased Humidity Test	<p>85% R.H.*85 +2/-0℃ *1000±12HRs            Equipment: 高新 TH-1S-C、RF LCR METER            Test the quantity: 90pcs。</p>	<p>Appearance: Cracking, chipping and any other defects harmful to the characteristics should not be allowed。            L: Within ±10% of initial value。</p>
Vibration Test	<p>It shall be soldered on substrate。            Oscillation Frequency: 10~2K~10Hz for 20 minute。            Equipment: Vibration checker。            Total Amplitude: 1.52mm±10%            Testing Time : 12 hours(20 minutes, 12 cycles each of 3 orientations)            Test the quantity: 30pcs。</p>	<p>Appearance: Cracking, chipping and any other defects harmful to the characteristics should not be allowed。            L: Within ±10% of initial value。</p>

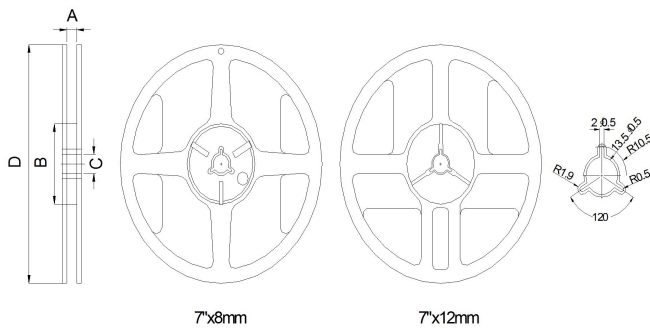
## Application Notice

### • Storage Conditions

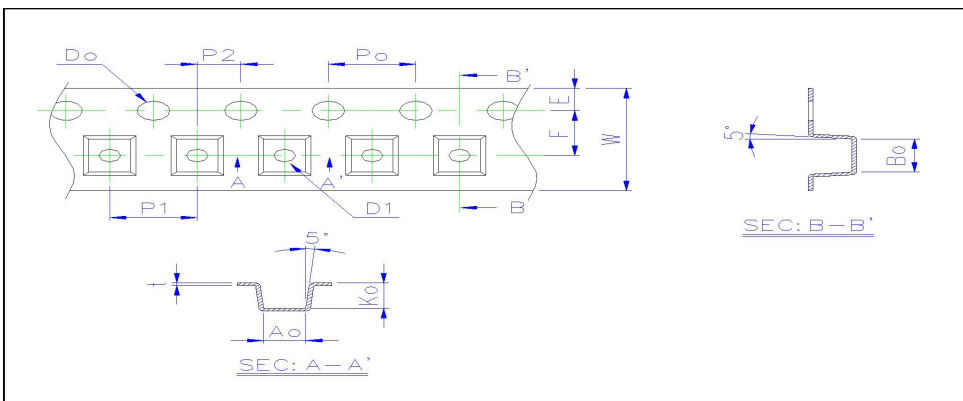
To maintain the solderability of terminal electrodes:

1. products meet IPC/JEDEC J-STD-020D standard-MSL, level 1.
2. Temperature and humidity conditions: Less than 40℃ and 60% RH.
3. Recommended products should be used within 6 months form the time of delivery.
4. The packaging material should be kept where no chlorine or sulfur exists in the air.

九. Reel Dimension & Tape Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
7"x8mm	9.0±0.5	60±2	13.5±0.5	178±2
7"x12mm	13.5±0.5	60±2	13.5±0.5	178±2



Size	Ao(mm)	Bo(mm)	Ko(mm)	W(mm)	E(mm)	F(mm)	Po(mm)	P1(mm)	Do(mm)
1210	1.40±0.10	1.15±0.10	0.93±0.10	8.00±0.20	1.75±0.10	3.50±0.05	4.0±0.05	4.0±0.10	1.5+0.1,-0
1608	1.00±0.10	1.65±0.10	1.18±0.10	8.00±0.20	1.75±0.10	3.50±0.05	4.0±0.05	4.0±0.10	1.5+0.1,-0
2012	1.50±0.10	2.35±0.10	1.45±0.10	8.00±0.20	1.75±0.10	3.50±0.05	4.0±0.05	4.0±0.10	1.5+0.1,-0
3216	1.88±0.10	3.50±0.10	2.10±0.10	8.00±0.20	1.75±0.10	3.50±0.05	4.0±0.05	4.0±0.10	1.5+0.1,-0
4532	3.45±0.10	4.90±0.10	3.05±0.10	12.00±0.20	1.75±0.10	5.50±0.05	4.0±0.05	8.0±0.10	1.5+0.1,-0

Packaging Quantity(Unit: PCS)



Chip Size	1210	1608	2012	3216	4532
8mm/ Reel	3000	2000	2000	2000	500