

SPECIFICATION

产品规格书

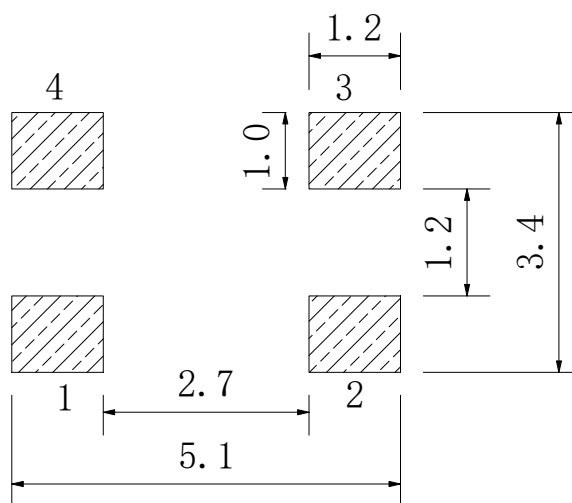
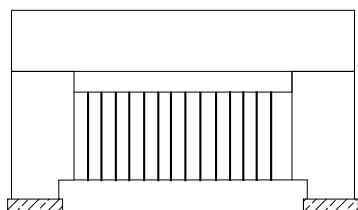
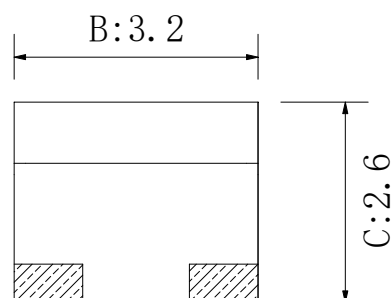
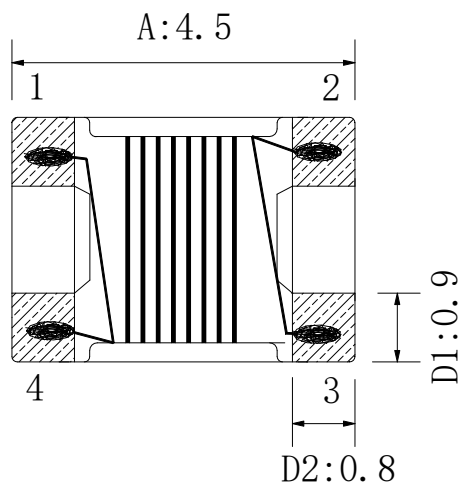
FPE PART NO. :	AC4532F-510L		
DESCRIPTION:	Wire Wound Type Common Mode Filter		
 广东美信科技股份有限公司 GUANGDONG MISUN TECHNOLOGY CO., LTD TEL: (86)769-86761589 86762589 FAX: (86)769-86761549 广东省东莞市企石镇新南金湖一路 3 号 No.3, Jinhu 1st Road, Xinnan, Qishi Town, Dongguan City, Guangdong Province 为电磁赋能，创工业至美 Enable electromagnetism, Create ultimate beauty		FPE APPROVAL (公司承认章)	
			
		DRAWN BY:	<i>Jingwei XU</i>
		CHECKED BY:	<i>Junmao Zhang</i>
		APPROVAL BY:	<i>Angus Shi</i>

1. 特征 Features

- ◆ Used radiation noise suppression for automotive CAN-BUS / Flex Ray systems
- ◆ Used for Industrial field bus systems
- ◆ Compliance with RoHS and Halogen Free
- ◆ AEC-Q200 qualified
- ◆ Operating temperature -40°C~150°C



2. 外形尺寸 Dimension



SUGGEST LAYOUT

(Steel plate thickness 0.1mm Typ)

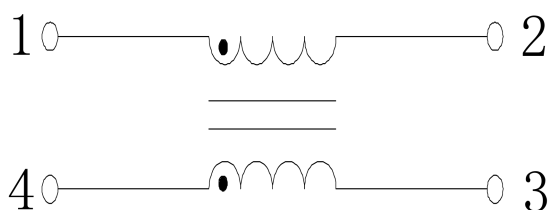
Dimensions in mm

A(mm)	B(mm)	C(mm)	D1(mm)	D2(mm)
4.5±0.20	3.2±0.20	2.6±0.20	0.9±0.20	0.8±0.20

3.电性规格 Specification

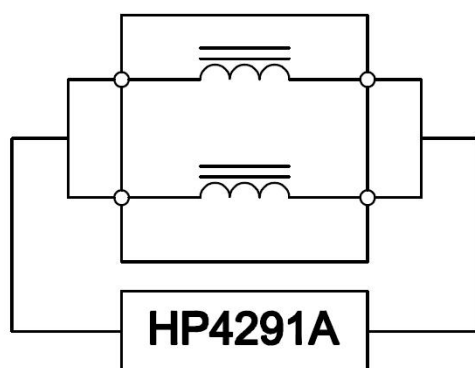
Part Number	Common mode Impedance (Ω @10MHz)	Inductance(uH) 100KHz/0.1v	DC Resistance (Ω) Max.	Rated Current (mA)	Rated Volt (Vdc)	Withstand Volt. (Vdc)	IR (Ω) Min.
AC4532F-510L	1000 Min	51 μ H-30%/+50%	1.0	230	50	125	10M

4. 电路图 Schematic Diagram

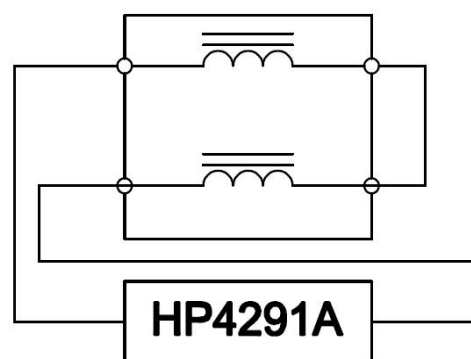


5.测量电路 Measurement Circuits 2Line

Common mode

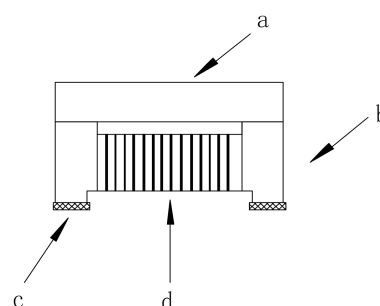


Differential mode



6.材料 Materials

No.	Description	Specification
a.	Upper Plate	Ferrite
b.	Core	Ferrite Core
c.	Termination	Ag/Ni/Sn
d.	Wire	Enameled Copper Wire



7. 可靠性和试验条件 Reliability and Test Condition

序号	试验项目	参考标准	试验条件	判断依据	结果判定
1	可焊性	J-STD-002	8 小时蒸汽老化，助焊剂类型：ROLO, 温度：245℃。时间；2. 5s	1. 试验前后外观无可见物理性异常； 2. 端子表面焊锡覆盖率大于 95%。	PASS
2	低温	MIL-STD-202 Method 108	温度： -40℃, 持续时间：1000h。	1. 试验前后外观无可见物理性异常； 2. 电性能满足规格书要求。	PASS
3	高温	MIL-STD-202 Method 108	温度：150℃, 持续时间：1000h。	1. 试验前后外观无可见物理性异常； 2. 电性能满足规格书要求。	PASS
4	振动	MIL-STD-202 Method204	加速度：15g，一次扫频时间：20min，扫描次数：3 方向 66 次循环，试验频率：10-2000Hz；	1. 试验前后外观无可见物理性异常； 2. 电性能满足规格书要求。	PASS
5	推力	MIL-STD-202 Method 211	对器件侧面均衡施加 15N 作用力，保持 60s	1. 试验前后外观无可见物理性异常； 2. 电性能满足规格书要求。	PASS
6	耐焊接热	MIL-STD-202 Method 210	回流焊三次，峰值温度：260℃。	1. 试验前后外观无可见物理性异常； 2. 电性能满足规格书要求。	PASS
7	湿热	MIL-STD-202 Method 103	时间： 1000H；温度：85℃；湿度：85%RH；	1. 试验前后外观无可见物理性异常； 2. 电性能满足规格书要求。	PASS
8	冷热冲击	JESD22Method JA-104	低温：-55℃, 高温：150℃, 持续时间: 30min: 温度转换时间：≤5min:循环数：1000	1. 试验前后外观无可见物理性异常； 2. 电性能满足规格书要求。	PASS
9	静电放电	ISO10605:2008/A MD1 :2014	放电阻抗： 330Ω150pF;放电电压：4kV;放电电压极性： 正极&负极；放电次数： 3 次；放电模式： 单次放电;放电间隔周期：1S;	1. 试验前后外观无可见物理性异常； 2. 电性能满足规格书要求。	PASS

8. 焊接和安装 Soldering and Mounting

8-1. Soldering

Mildly activated rosin fluxes are preferred. FPE terminations are suitable for all wave and re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

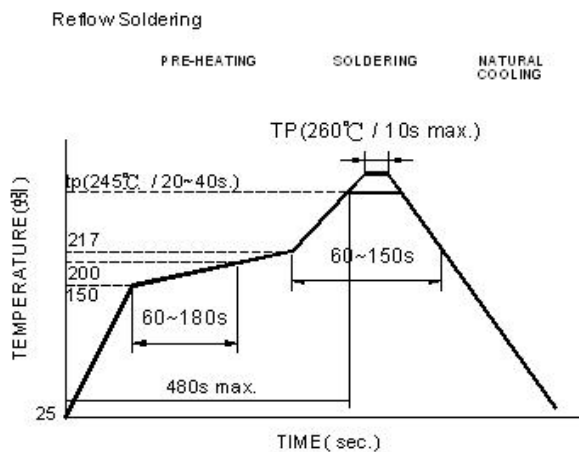
8-1.1 Solder re-flow:

Recommended temperature profiles for re-flow soldering in Figure 1.

8-1.2 Soldering Iron(Figure 2):

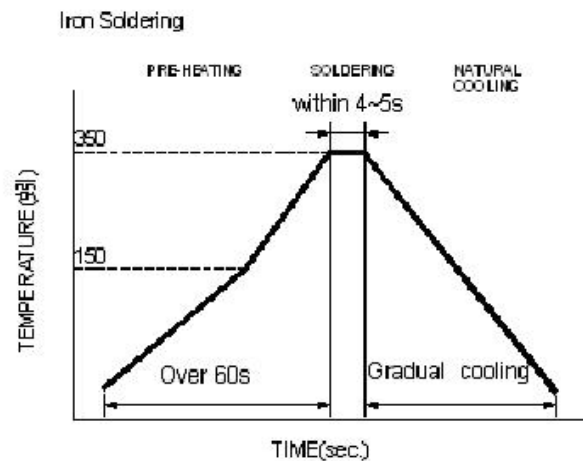
Products attachment with a soldering iron is discouraged due to the inherent process control limitations. In the event that a soldering iron must be employed the following precautions are recommended.

- Preheat circuit and products to 150°C
- Never contact the ceramic with the iron tip
- Use a 20 watt soldering iron with tip diameter of 1.0mm
- 350°C tip temperature (max)
- 1.0mm tip diameter (max)
- Limit soldering time to 4~5 sec.



Reflow times: 3 times max.

Fig.1

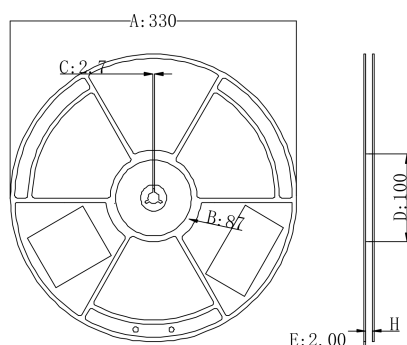


Iron Soldering times: 1 times max.

Fig.2

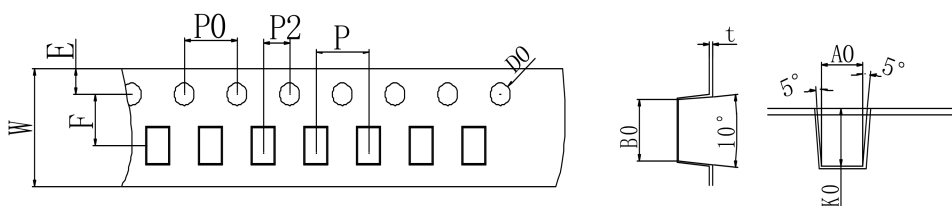
9. 包装信息 Packaging Information

9-1. Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	H(mm)
13''x12mm	330±2	87±1	2.7±0.5	100±1	1.9±0.2	12.2±0.5

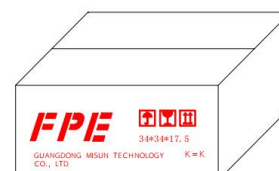
9-2. Tape Dimension 12mm



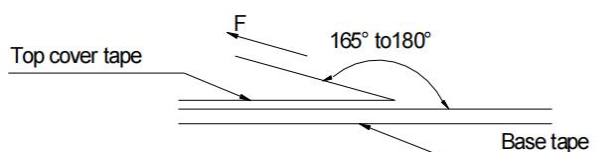
W(mm)	E(mm)	F(mm)	P0(mm)	P2(mm)	P(mm)	DO(mm)	t(mm)	B0(mm)	A0(mm)	K0(mm)
12.00±0.10	1.75±0.10	3.50±0.10	4.00±0.10	2.00±0.10	8.00±0.10	1.50±0.10	0.3±0.05	5.00±0.10	3.65±0.10	3.05±0.10

9-3. Packaging Quantity

Chip/Reel	Carton
2500	20000



9-4. Tearing Off Force



The force for tearing off cover tape is 15 to 120 grams in the arrow direction under the following conditions.

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

Application Notice

·Storage Conditions

To maintain the solderability of terminal electrodes:

1. FPE products meet IPC/JEDEC J-STD-020D standard-MSL, level 1.
2. Temperature and humidity conditions: Less than 40°C and 60% RH.
3. Recommended products should be used within 12 months from the time of delivery.
4. The packaging material should be kept where no chlorine or sulfur exists in the air.

·Transportation

1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.