



方成电子（东莞）有限公司
SPECIFICATION FOR APPROVAL

CUSTOMER:

Part Number : DIP Common Line Filter

CUSTOMER Number: 共模电感

CUSTOMER Part :

Fangcheng part : FC-SLF1820-473

DATE: 2024-3-10

REV: 01



made in fangcheng:

CUSTOMER APPROD:



prepad	chechd	Approd
黄敏	罗佳佳	刘凡

prepad	chechd	Approd

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Customer:

made : 方成电子(东莞)有限公司

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Description of Revision

REV	Description of Revision	DATE	Prepad	Notes
01	Initial Release	2024-3-10	黄敏	

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Notice of Use

For the parameters not prescribed in the *Specification for Approval*, please refer to the following standards or the relative industry standards.

1. Product in packing storage condition : temperature 540, RH70%.

2. A storage of - F C -Electronic products for longer than 12 months is not recommended, Within other effects, the terminals may suffer degradation, resulting in bad solderability. Therefore, all products shall be used within the period of 12 months based on the day of shipment.

3. Do not keep products in unsuitable storage conditions, such as areas susceptible to high temperatures, high humidity, dust or corrosion.

4 Always handle products with care.

5 Don't touch electrodes directly with bare hands as oil secretions may inhibit soldering.

Always ensure optimum conditions for soldering.

6 When this product will be used on a similar or new project to the original one, sometimes it might be unable to satisfy the specifications due to different condition of usage.

7 This inductor itself does not have any protective function in abnormal condition, such as overload, short-circuit, open-circuit conditions, etc. Therefore, it shall be confirmed that there is no risk of smoke, fire, dielectric withstand voltage, insulation resistance, etc., or use in abnormal conditions protective devices or protection circuit in the end product.

8 Hi-Pot test with higher voltage than spec value will damage insulating material and shorten its life.

IPC 020D Joint Industry standard

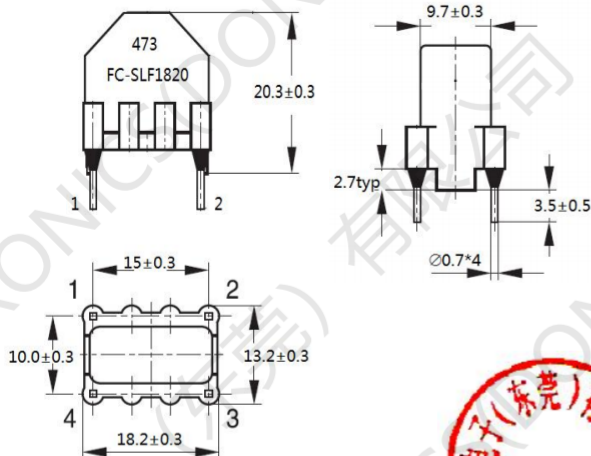
IEC1007 《Transformer and inductors for use in electronic and telecommunication equipment—Measuring methods and test procedures》

(ROHS or other environmental request)



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1. Appearance and Dimensions(mm)

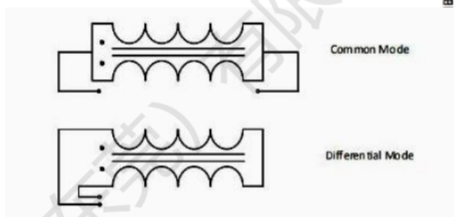
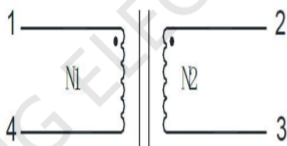


FC-SLF1820 –Series

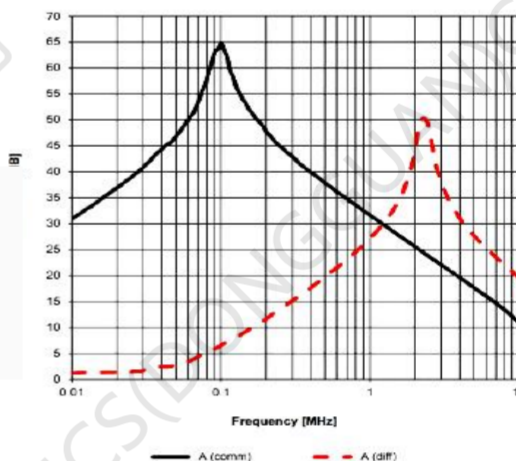
- Easy assembling due to 4 pin housing
- Toroidal core choke with sector winding
- High interference suppression for common mode
- Operating temperature: -40 °C bis 125 °C
- Flammability corresponding to UL 94 V-0
- Compact and small size 4 soldering pins for perfect mechanical decoupling
- interferences in low and middle frequency ranges Low stray field



2. Schematic :



6. FC-SLF1820-473



3. Electrical Characteristics :

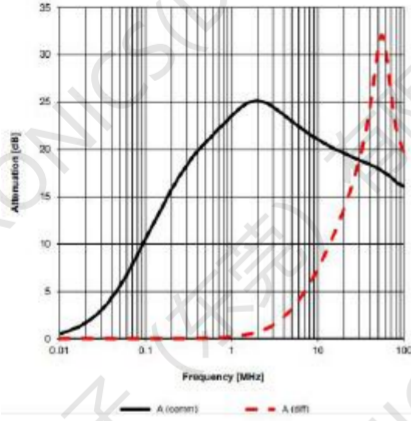
TEST CONDITION: TEMPERATURE AT 25°C,				
NO 序号	PARAMETER 参数	TERMINAL 脚位	SPCIFICATION 规格	TEST INSTRUMENTS 测试设备
1	INDUCTANCE	L=(1,-4/2,-3)	47.0mH-30%/+50%	10KHz,0.25V CHROMA 3250 or EQUAL
2	Stray inductance	LK(1,-4/2,-3)	500uH/max	10KHz,0.25V CHROMA 3250 or EQUAL
3	工作电流 I=A(DC)	I=(1-4) (2-3)	0.3-0.5A/ typ	10KHz,0.25V CHROMA 3250 or EQUAL
4	U 电压范围	V=(1-4) (2-3)	85V-265V AC/50-60HZ	宽电压输入
5	DCR 直流电阻	R= (1-4) (2-3)	2.2Ω /Max	GKT2511 25°C
6	HI-POT 高压测试	Coil-Coil	AC 1500V50-60HZ 2S	CH19503
7	INSULATION RESISTANCE	COIL-CORE	500VDC/100MΩ MIN	CHROMA 19053 DC500V

Storage conditions (packaged) -25 °C ... +40 °C, 75% RH

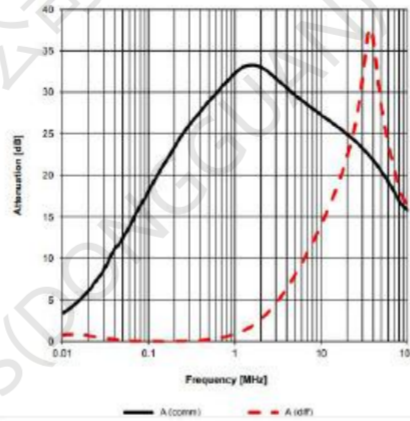
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3.2 IMPEDANCE VS . FREQUENCY :

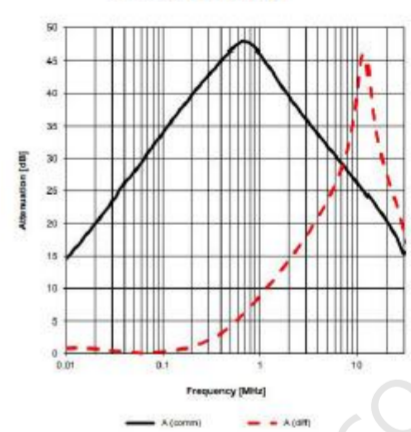
1. FC-SLF1820-401



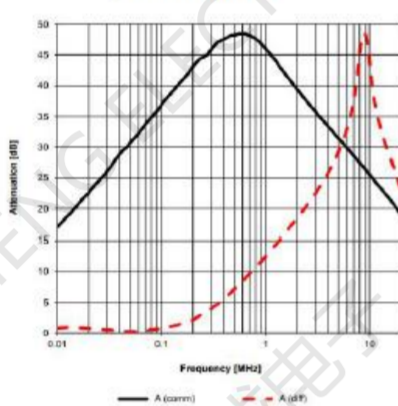
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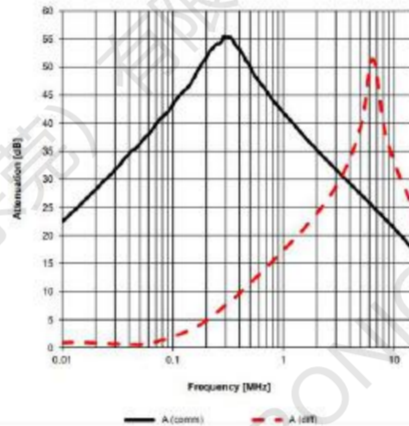
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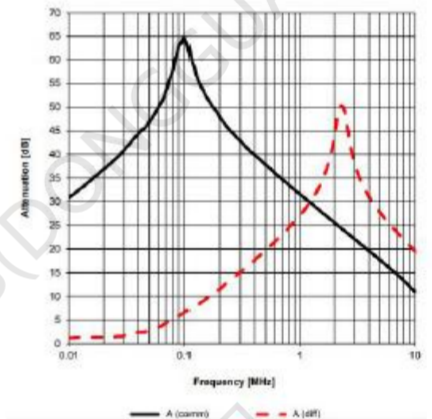
4. FC-SLF1820-103



5. FC-SLF1820-183

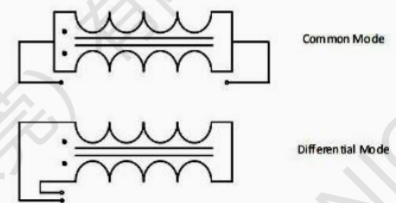


6. FC-SLF1820-473



FC-SLF1820 –Series

- Easy assembling due to 4 pin housing
- Toroidal core choke with sector winding
- High interference suppression for common mode
- Operating temperature: -40 °C bis 125 °C
- Flammability corresponding to UL 94 V-0
- Compact and small size 4 soldering pins for perfect mechanical decoupling
- interferences in low and middle frequency ranges Low stray field



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4. Reliability and test condition:

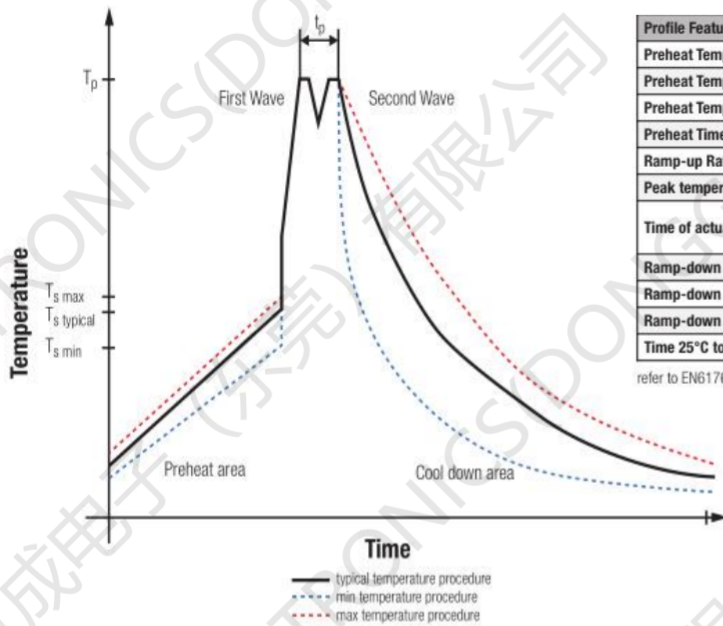
Test item	test condition	Remark
Cold Operating Test	GB2423.1 Ad	
Heat Operating Test	GB2423.2 Bd	
Cold Storage Test	GB2423.1 Ab	
Heat Storage Test	GB2423.2 Bb	
Steady Damp Heat Test	GB2423.3 Cb	
Circular Damp Heat Test	GB2423.4 Db	
Temperature Cycling Test	GB2423.22 Nb	
Temperature Shock Test	GB2423.22 Na	
Vibration Test	GB2423.10~15 Fc, Fdb	
Mechanical Shock Test (Bump)	GB2423.5 Eb	
Free Fall Test	GB2423.8 Ed	
Solderability	GJB360A-96	
High Temperature Step Stress Test	Enhancement Test Specifications	
Low Temperature Step Stress Test		
High-speed Thermal Cycling		
Limit Vibration		
Composite Stress		
Highly-Accelerated Temperature and Humidity Stress Test (HAST) (



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5. Soldering Specification:

5.1 Reflow Profile for Components.



Profile Feature		Pb-Free Assembly	Sn-Pb Assembly
Preheat Temperature Min	$T_{s\ min}$	100 °C	100 °C
Preheat Temperature Typical	$T_{s\ typical}$	120 °C	120 °C
Preheat Temperature Max	$T_{s\ max}$	130 °C	130 °C
Preheat Time t_s from $T_{s\ min}$ to $T_{s\ max}$	t_s	70 seconds	70 seconds
Ramp-up Rate	ΔT	150 °C max.	150 °C max.
Peak temperature	T_p	250 °C - 260 °C	235 °C - 260 °C
Time of actual peak temperature	t_p	max. 10 seconds max. 5 seconds each wave	max. 10 seconds max. 5 seconds each wave
Ramp-down Rate, Min		~ 2 K/second	~ 2 K/second
Ramp-down Rate, Typical		~ 3.5 K/second	~ 3.5 K/second
Ramp-down Rate, Max		~ 5 K/second	~ 5 K/second
Time 25°C to 25°C		4 minutes	4 minutes

refer to EN61760-1:2006

5.2 波峰焊温度:255°C ±5°C;时间:不少于 7 秒。

波峰焊预热温度:100 至 160°C;时间:不少于 10 秒。

5.3 高温耐热性:

在 260°C 的熔融钎料中, 停留时间不少于 10 秒, 无质量问题。

5.4 返修温度和时间:

温度: 260°C; 时间: 不少于 5 秒。

5.5 焊接次数:

元器件能承受的焊接次数不少于 5 次。

6.1 包装:

- 1) 包装箱上应标明产品型号、名称、数量、出厂日期、承制方名称及出厂检验章;
- 2) 货物运达客户方后, 包装箱封条应完好, 箱体无破损、开裂等现象;
- 3) 电感用木箱或其他材料包装, 方便拆卸, 四周用软性材料填充;

6.2 外观:

- 1) 产品应有合格证和耐擦防水洗标签, 应注明型号、规格;
- 2) 产品外观整洁, 应无破损、划伤;



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