TLDCM5030 Series

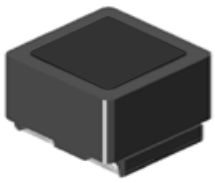
DC COMMON MODE FILTER

TOP-EMC

Generls

This specification covers the engineering requirements for the TLDCM5030 Series (DC Common Mode Filter)

Features



- A chip-type common mode filter for large current applications. Noise is greatly suppressed.
- Height and size have been considered, resulting in a compact and light-weight choke coil. Applicable for the miniaturization required to reduce the size and weight of portable equipment.
- The products contain no lead and also support lead-free soldering.
- This product does not contain regulated substances that are slated to be included in RoHS.
- AEC-Q200 qualified

Applications

Used for power line noise suppression for any electronic devices
Used to counter adapter/battery line noise for relatively large electronic devices such as notebook PCs, stand-alone word processors,etc

Temperature Ranges

Operating	–40 to +105°C
Storge(after amount)	–50 to +155°C

Part Number System

TLDCM	5030	-2	-102	Y	F
①	②	③	④	⑤	⑥

① Type:TLDCM

② External Dimensions (L×H) (mm) :5.0×2.5mm

③ Number of Lines : 2

④ Impedance : 102=1000Ω

⑤ Tolerance : ±30%

⑥ Hazardous Substance Free Products : F

Electrical Characteristics

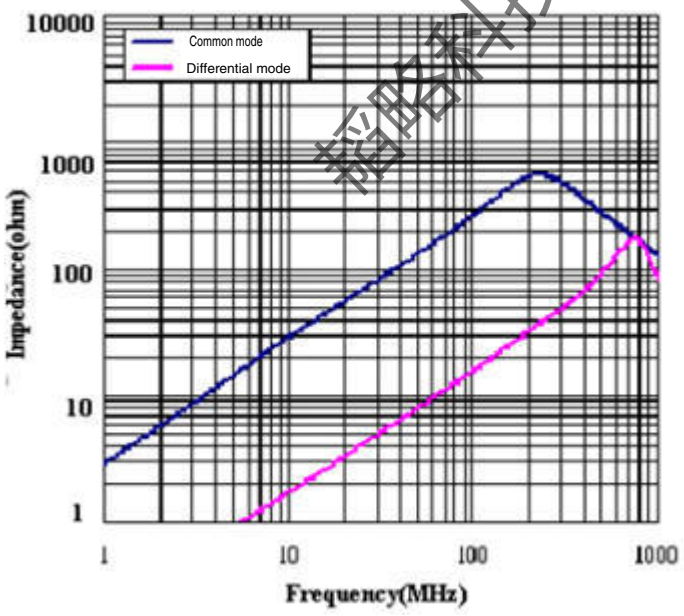
Part Name	Impedance Z(Ω)TYP@ 100 MHz	Rated Voltage (V) MAX	DCR (mΩ) MAX	Rated Current (A) Max.	IR (mΩ) MIN
TLDCM5030-2-251YF	250	50	20	5.0	10
TLDCM5030-2-421YF	420	50	27	4.0	10
TLDCM5030-2-501YF	500	50	27	4.0	10
TLDCM5030-2-102YF	1000	50	34	2.0	10
TLDCM5030-2-142YF	1400	50	56	1.5	10

NOTE:

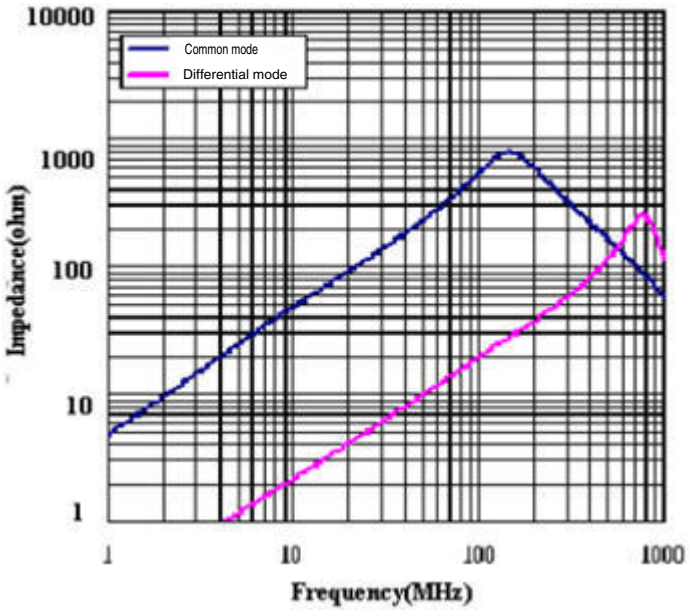
1. Operating temperature range-40℃~105℃ (Including self-temperature rise)
2. Irms for a 40℃ temperature rise from 25℃ ambient.
3. Z:1,2-4,3 Common mode

Typical Electrical Characteristicsimpedance vs. Frequency Characteristics

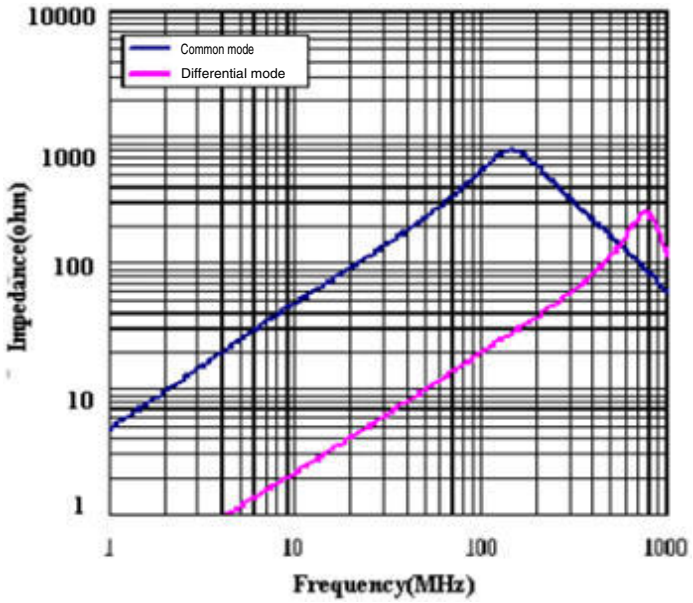
TLDCM5030-2-251YF



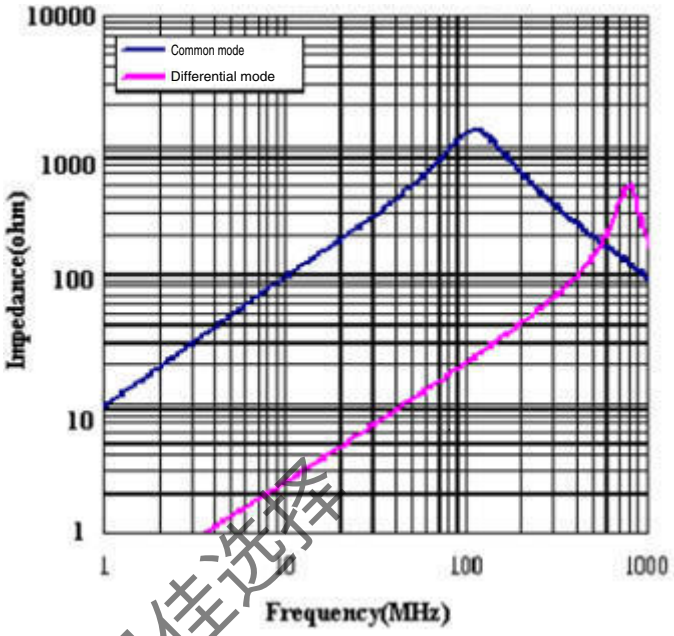
TLDCM5030-2-421YF



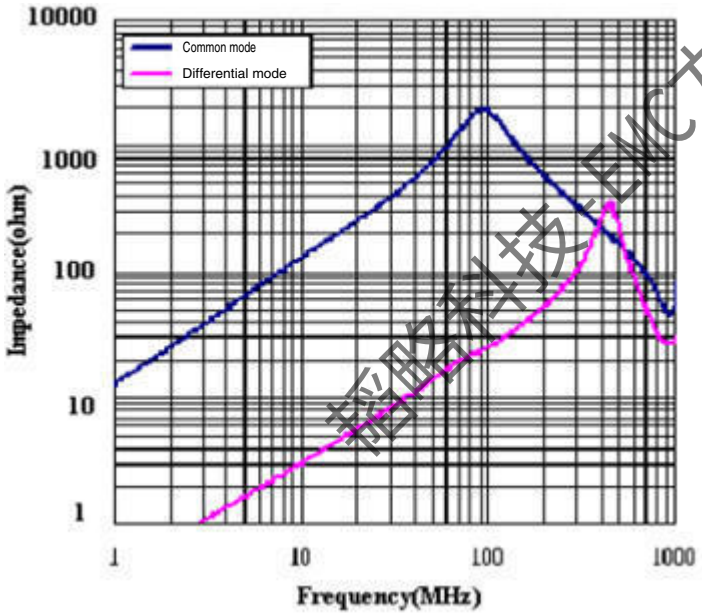
TLDCM5030-2-501YF



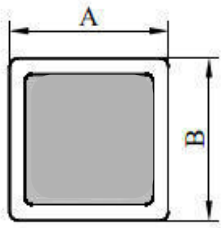
TLDCM5030-2-102YF

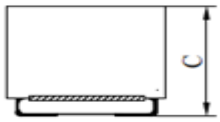


TLDCM5030-2-142YF

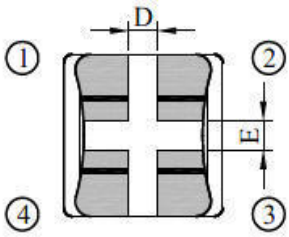


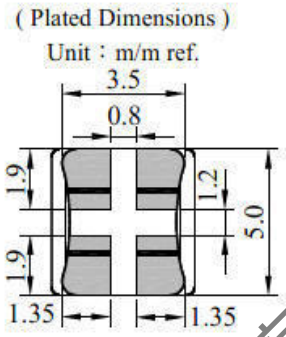
Dimensions (mm)



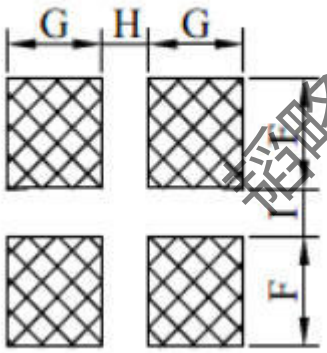


TYP	TLDCM5030
A	4.8 ±0.2
B	5.0 ±0.2
C	2.5 Max
D	0.8 ±0.2
E	1.0 ±0.2





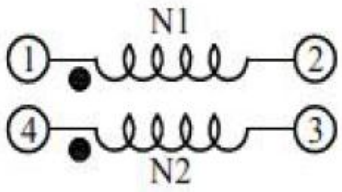
Land Pattern (mm)



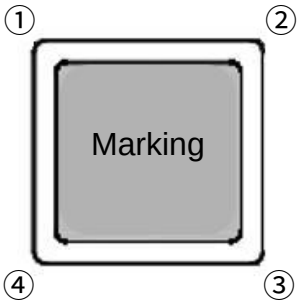
TYP	F	G	H	I
TLDCM5030	2.3 ±0.3	1.6 ±0.3	0.8±0.3	1.0 ±0.3

Schematics

Bottom ：



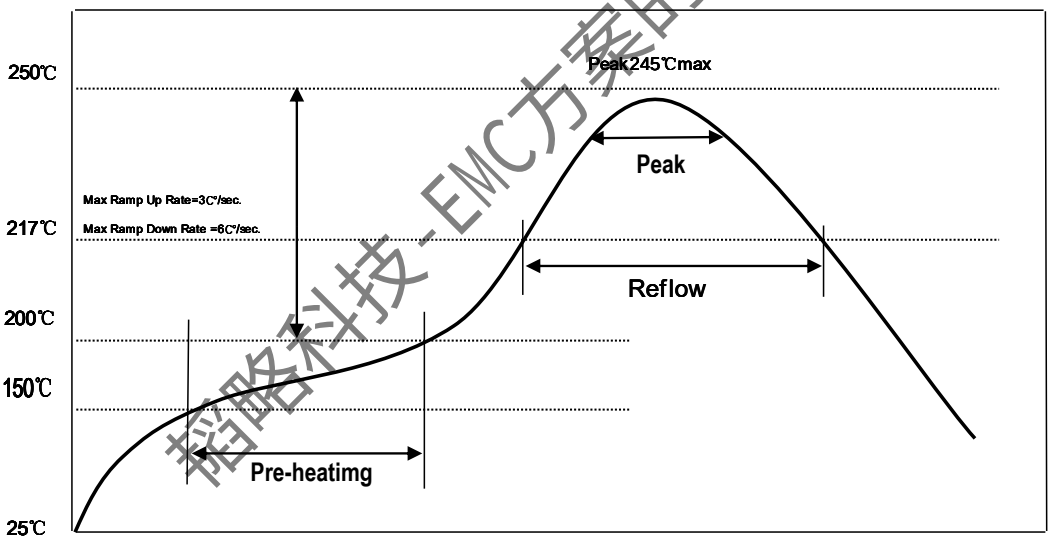
Top：



Reliability Testing

Operating Temperature	- 40 to +125 ℃ (Contain Heating coil)
Appearance Inspection	No external defects by visual inspection
Terminal Strength 	After soldering , between copper plaet and terminals of coils , push in two directions of X , Y with standing 10N(1.02kg) for10+/-2 sec. Terminal should not peel off. (Refer to figure at Left)
Heat endurance of reflow soldering	Refer to figure
Insulating resistance	Over 100 MΩ at 100V D.C . between wire and core
Dielectric Strength	Apply at 0.5KV 3mA for 1 minute between wire and core
Temperature characteristics	Inductance coefficient (0~2,000) × 10 / ℃(- 40~ + 125 ℃)
Humidity characteristics	Inductance deviation within ± 10% , after 96 hours in 90~95% relative humidity at 40 ± 2 ℃ and 1 hours drying under normal condition
A test is made under the above mentioned condition , and it is kept for 2 hours in the normal	

Recommended Soldering Technologies



Item.	Ramp-up	Preheatimg	Reflow	Peak Temp	Cooling
Temp.scope	R.T~150℃	150℃~200℃	217℃	245±5℃	PeakTemp.~150℃
Time spec	———	60~180 sec	60~150sec	20~40sec	———
Time result	———	70~95 sec	70~95sec	20~35sec	———

Contact Information

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