

Common Mode Choke for DCDC Power Lines CM6050 Series

FEATURES AND APPLICATIONS

Laird CM6050 series common mode chokes improve performance and reliability. A low profile and compact design benefits automotive electronics, industrial and telecom design. Products feature superior common mode noise suppression over broadband frequency and reduce customer total EMC cost. Chokes are designed in wire wound construction and perform in extended operating temperature range and in harsh operating environment.

FEATURES

- Magnetic wire-wound structure
- Superior common mode noise suppression over broadband frequency
- Additional differential mode noise suppression by inherent leakage inductance
- Low profile and small size

APPLICATIONS

- Automotive DCDC power lines
- Telecom and Industrial DCDC power lines
- Common mode noise suppression for general power lines



PART NUMBER EXPLANATION

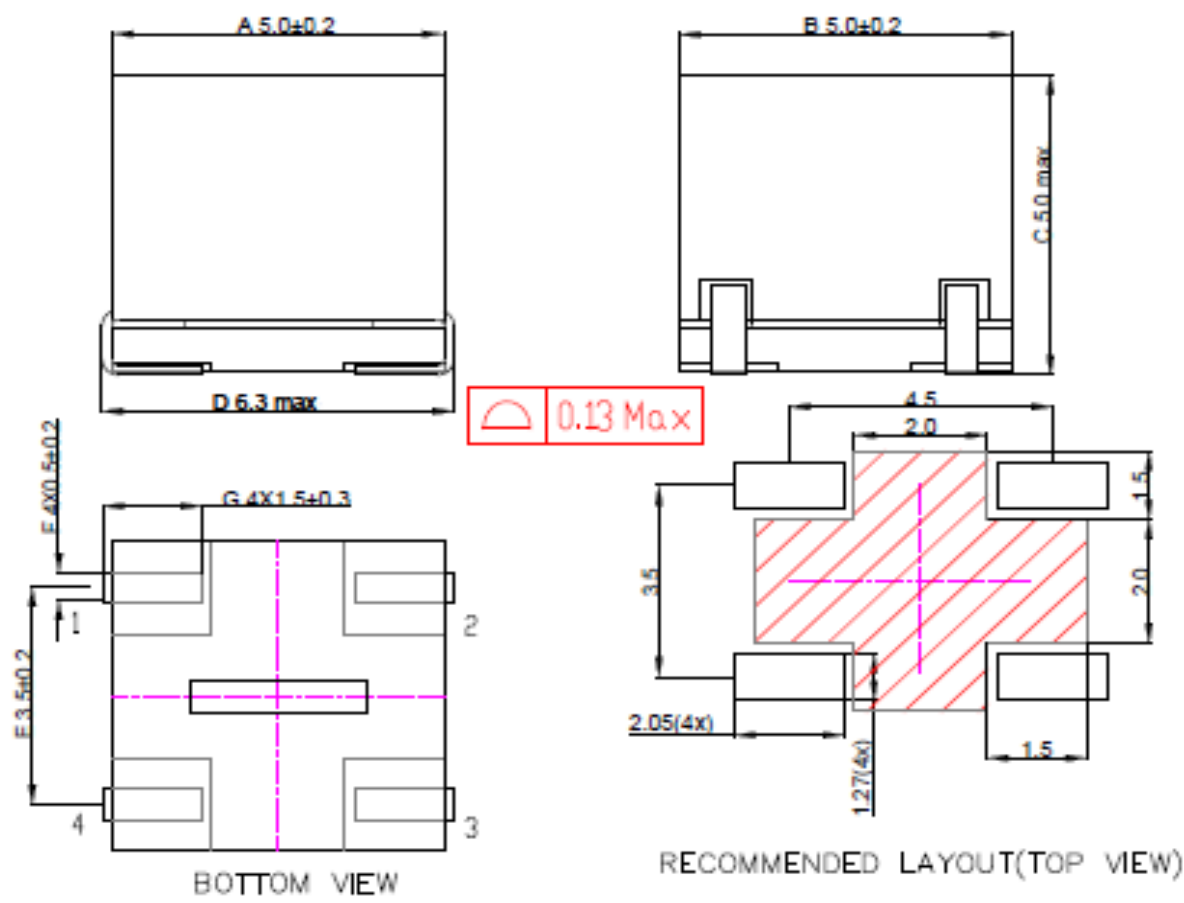
CM	6050	M	301	R	-	10
Product series code	Dimension code	Tolerance code	Impedance code	Packing code		Number code

ELECTRICAL SPECIFICATIONS

- Reliability test for this part meets AEC-Q200 standard
- Impedance tested at 10MHz
- Operating Temperature range :
CM6050 Series -55°C to +150°C (Including self - temperature rise)
- Storage temperature range (packaging conditions): -10°C~+40°C and RH 60%(MAX.)

Common Mode Choke CM6050 Series

1. CM6050 SERIES DIMENSIONS



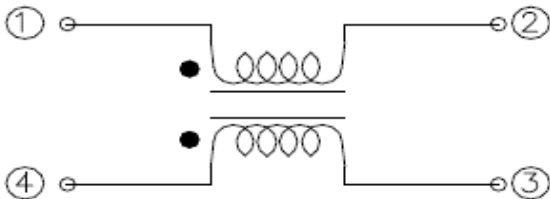
RED SHADES AREA IMPLEMENTS KEEP OUT ZONE
TO AVOID VIAS BENEATH IT.

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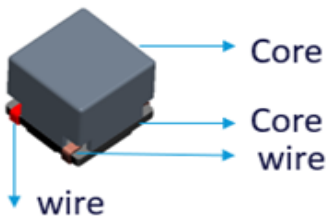
2.SPECIFICATION

Part No.	Common Mode Impedance(ohm) 10MHz		DC Resistance (ohm) Max	Rated Current (A) 125°C	Rated Current (A) 150°C	Rated Volt (Vdc)	IR (Mohm) Min
	Typ	Min					
CM6050M501R-10	500	300	22.1	3.1	1.80	80	10
CM6050M301R-10	300	180	14.3	3.7	2.20	80	10
CM6050M201R-10	200	120	9.1	4.4	2.40	80	10
CM6050M101R-10	100	60	5.2	5.6	2.9	80	10

2.EQUIVALENT CIRCUIT

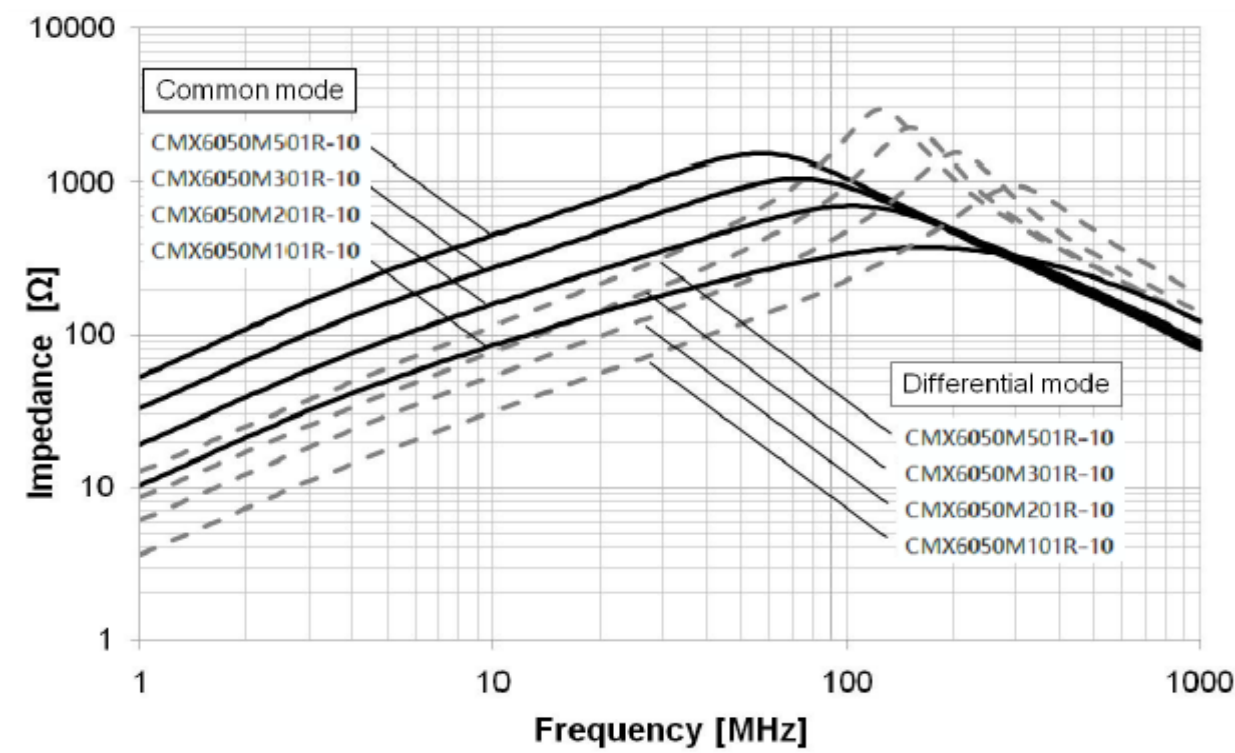


3.MATERIAL LIST



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4. CHARACTERISTICS CURVES



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5. SOLDERING

Mildly activated rosin fluxes are preferred.

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

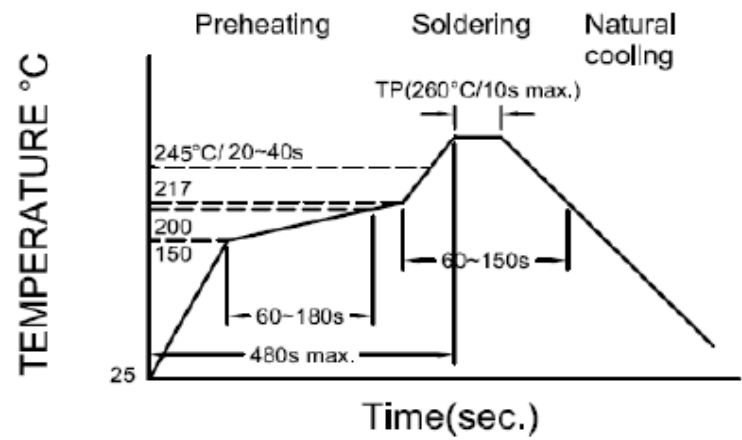
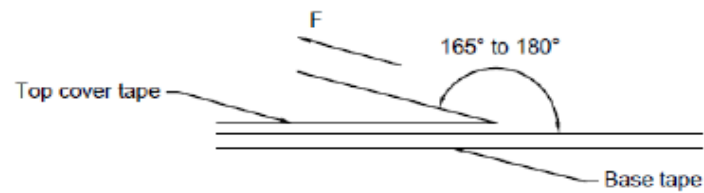


Figure 1. : Re-flow Soldering time
3 times Max.

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6-2 Tearing Off Force



The force for tearing off cover tape is 10~100 grame 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

7. Application Notice:

1.Storage Conditions:

To maintain the solderability of terminal electrodes:

- a) Recommended products should be used within 12 months from the time of delivery .
- b) The packaging material should be kept where no chlorine or sulfur exists in the air .

2. Transportation:

- a) Products should be -handled with care to avoid damage or contamination from perspiration and skin oils .
- b) Vacuum pick up is strongly recommended for individual components .
- c) Bulk handling should ensure that abrasion and mechanical shock are minimized .