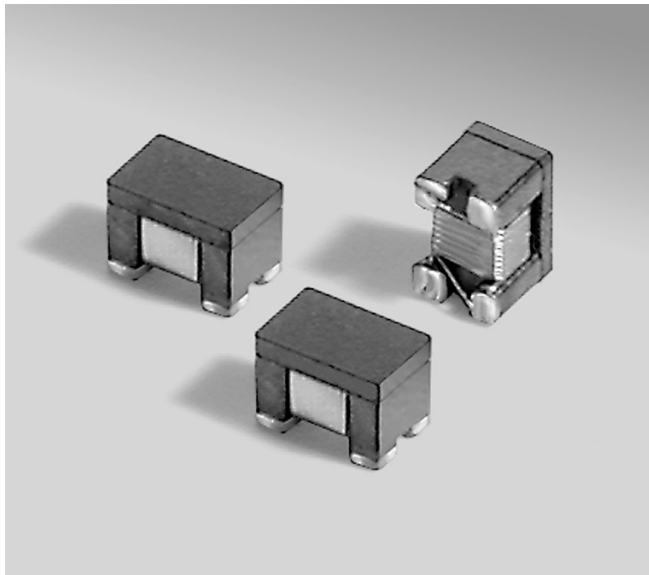


Common Mode Choke RA6870



- Recommended for use in the RX and TX sections of the Microchip MOST150 coaxial PHY application diagrams.
- Included in the OS82150, MOST150 Coaxial Transceiver, and OS81118, MOST150 INIC evaluation boards

Core material Ferrite

Environmental RoHS compliant

Terminations Matte tin over nickel over silver-palladium-glass frit.

Ambient temperature -40°C to +125°C with Irms current

Storage temperature Component: -40°C to +125°C.

Tape and reel packaging: -40°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)
38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

Packaging 2000/7" reel; 7500/13" reel; Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.14 mm pocket depth

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

Part number ¹	Common mode impedance max (kOhms)	Cutoff frequency ² (MHz)	Inductance ³ min (nH)	Irms ⁴ (mA)	DCR max ⁵ (Ohms)	Isolation ⁶ (Vrms)
RA6870-AL_	1.94 @ 700 MHz	590	700	300	0.69	250

1. When ordering, please specify **packaging** code:

RA6870-ALC

Packaging: C = 7" machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel).

B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter C instead.

D = 13" machine-ready reel. EIA-481 embossed plastic tape (7500 parts per full reel).

2. Frequency at which the differential mode attenuation equals 3 dB

3. Inductance shown for each winding, measured at 100 MHz using an Agilent/HP 4286A impedance analyzer and a Coilcraft SMD-A fixture

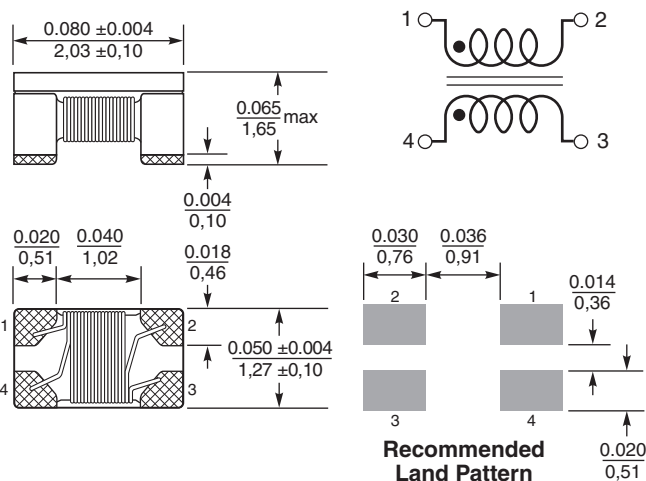
4. Current that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.

5. DCR is specified per winding.

6. Isolation (hipot) measured for one minute.

7. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

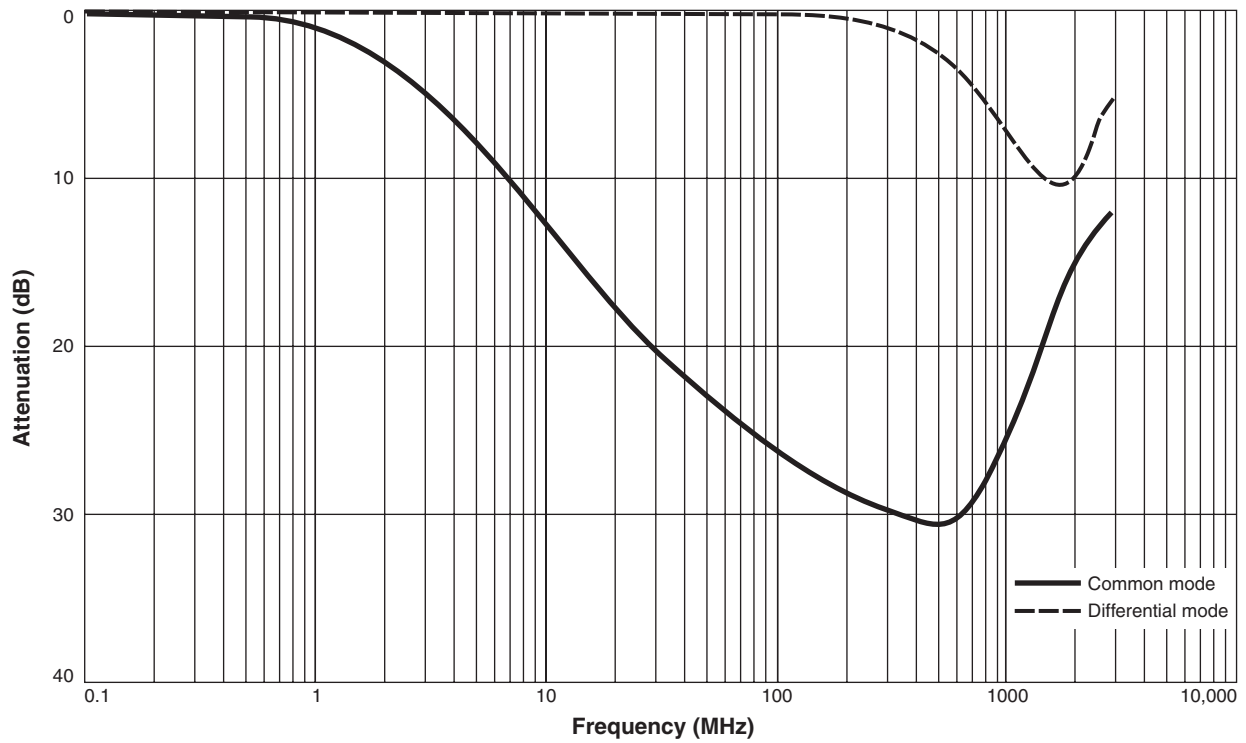


Dimensions are in $\frac{\text{inches}}{\text{mm}}$

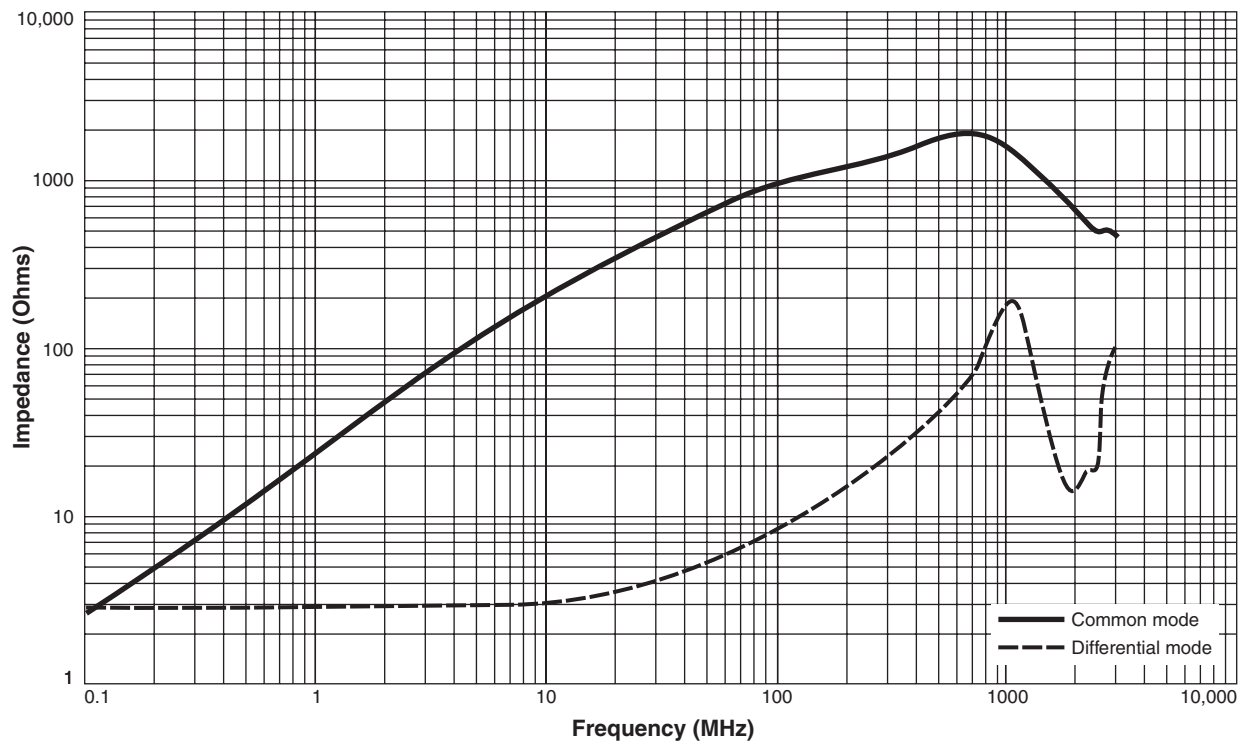


Common Mode Choke – RA6870-AL

Common Mode Attenuation (Ref: 50 Ohms)



Impedance vs Frequency



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