

Common Mode Choke Coil



ACM-0603

Request Samples



Check Inventory



1.60 x 0.85 x 1.1 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- Low profile design
- Small package to save PCB space
- Very low DC resistance
- Wide impedance range from 22ohm to 250ohm

Applications

- Elimination of common mode noise to achieve system EMC compliance.
- Used in high-speed, differential mode signal transmission applications such as USB 2.0, IEEE1394 and LVDS.

Electrical Specifications

Part Number	Common Mode Impedance	DC R	Rated Current	Rated Voltage	Withstand Voltage	Insulation Resistance
Units	$\Omega \pm 25\%$	Ω (MAX)	mA	Vdc	Vdc	M Ω (MIN)
ACM-0603-220	22	0.080	500	50	125	10
ACM-0603-450	45	0.110	500	50	125	10
ACM-0603-900	90	0.145	500	50	125	10
ACM-0603-121	120	0.175	500	50	125	10
ACM-0603-181	180	0.210	500	50	125	10
ACM-0603-251	250	0.280	400	50	125	10

Test Conditions

Inductance: measured using HP4287A at frequency of 100MHz

Rated Current: $\Delta 40^\circ\text{C}$ rise in component temperature.

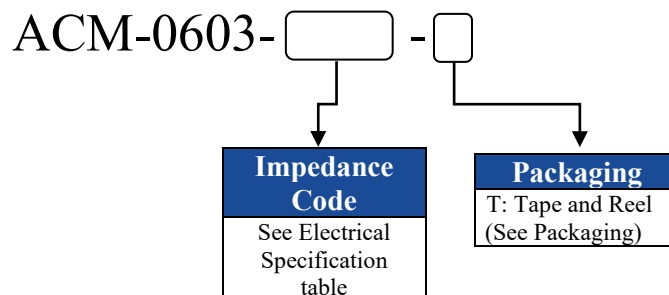
Operating Temperature: $-40^\circ\text{C} \sim +125^\circ\text{C}$. (including self-temperature rise)

Storage Condition: $-40^\circ\text{C} \sim +125^\circ\text{C}$ (on board), $-10^\circ\text{C} \sim +40^\circ\text{C}$ (with packaging) and R.H. 60 max

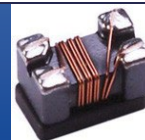
ACM-0603 Series is **RoHS Compliant and Pb free**.

ACM-0603 is commercial grade.

Part Identification



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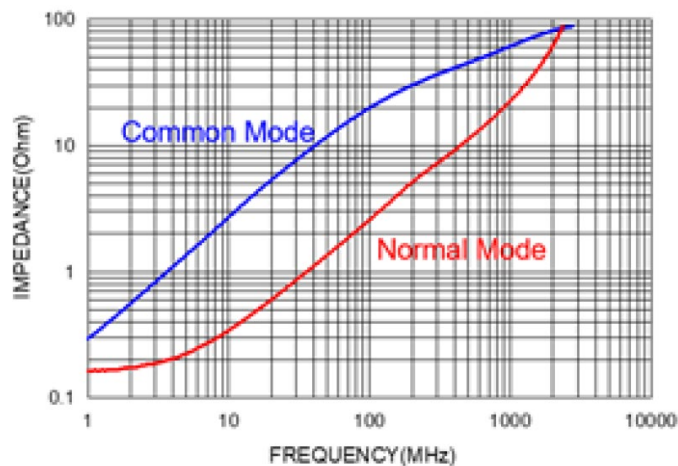
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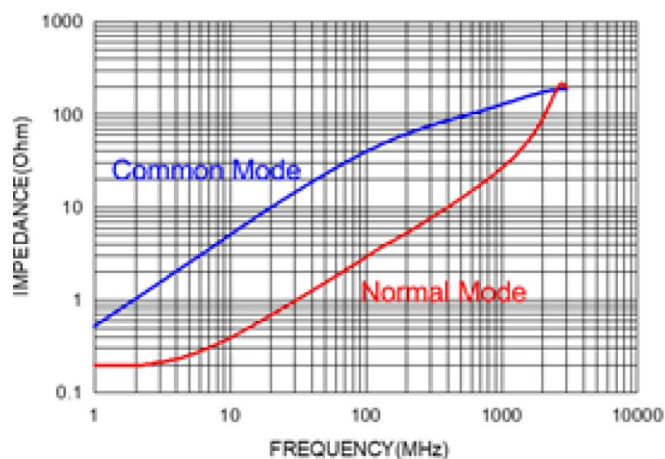
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Performance Graphs

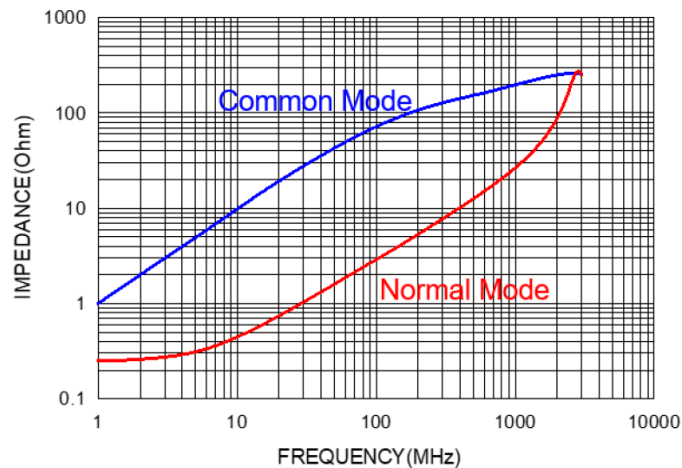
ACM-0603-220



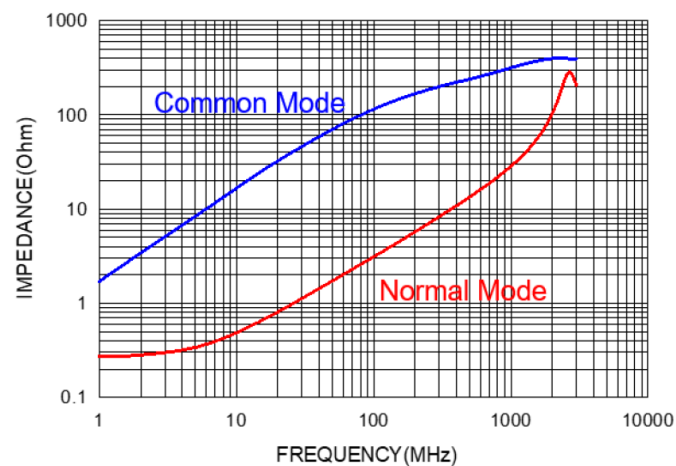
ACM-0603-450



ACM-0603-900



ACM-0603-121

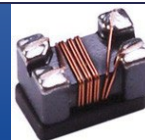


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REVISION B : 5/19/2025

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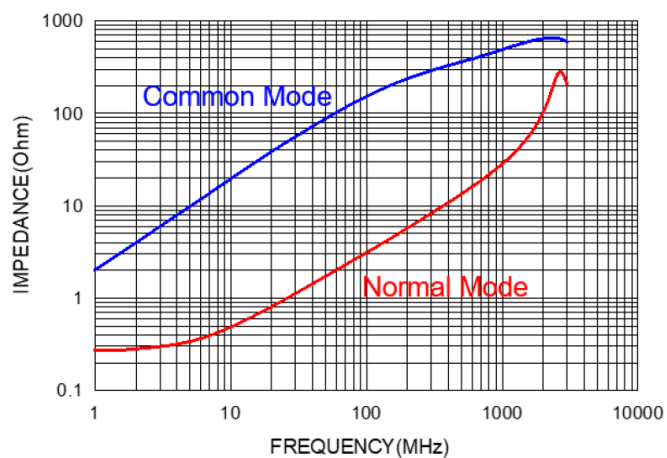


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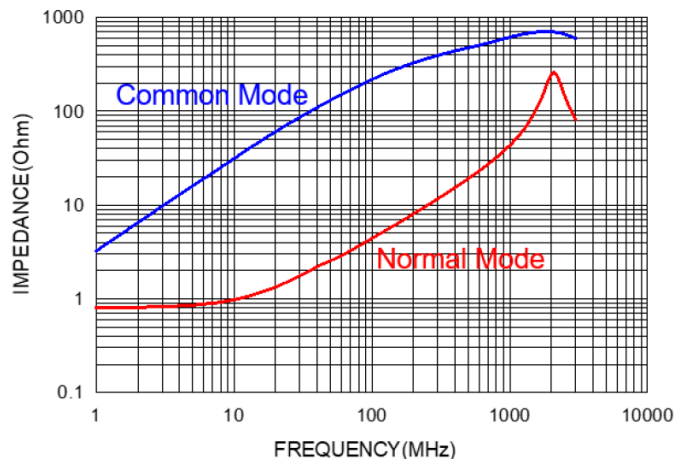


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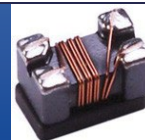
ACM-0603-181



ACM-0603-251



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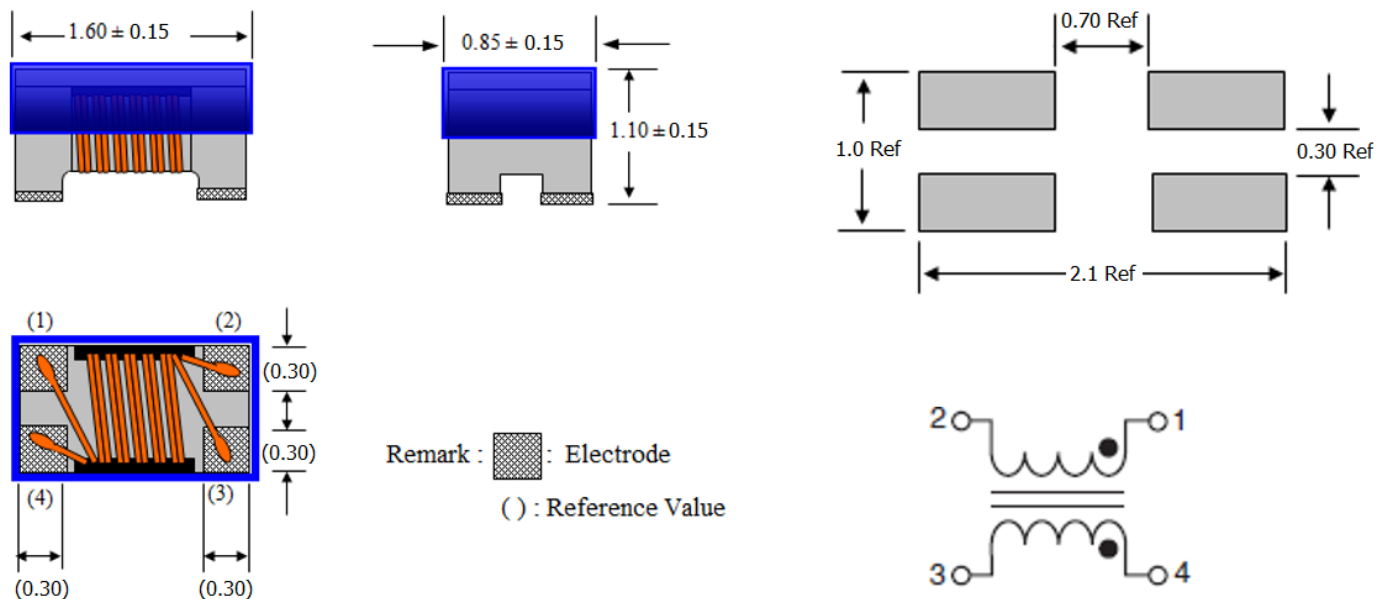


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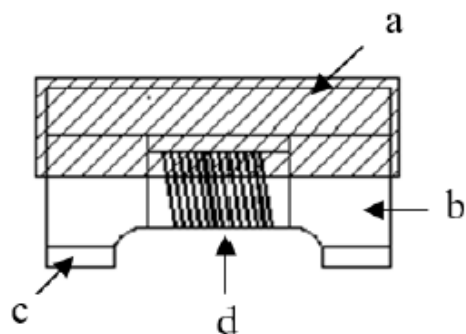
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Mechanical Specifications



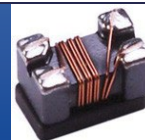
Dimensions: mm

Materials



Components	Material
a	Ferrite/UV Glue
b	Ferrite Core
c	Ag/Ni/Sn
d	Enameled Copper Wire

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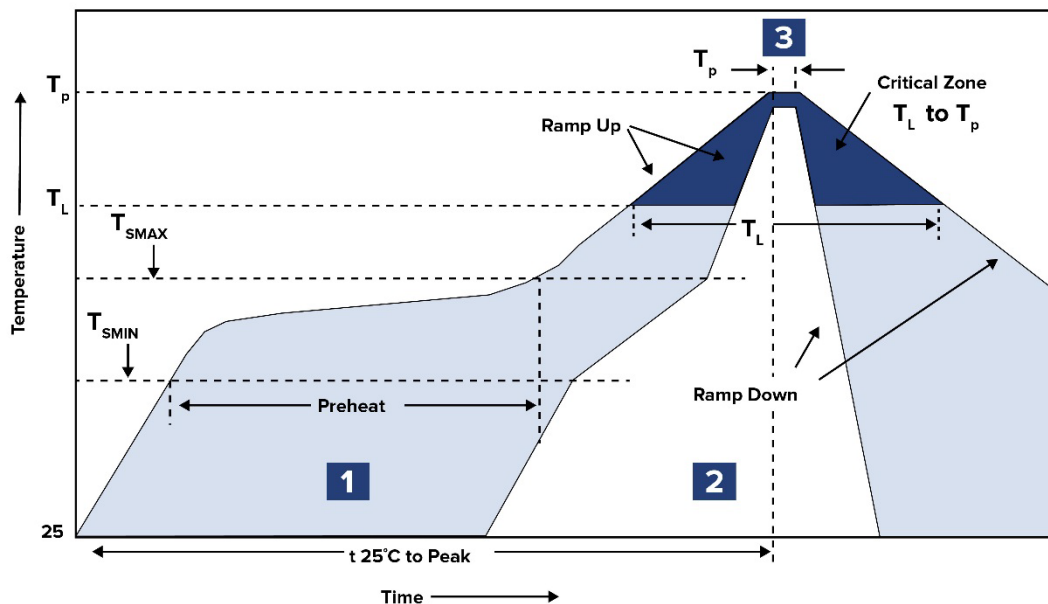


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Reflow Profile



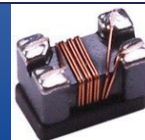
Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_L 217°C	60 ~ 150 sec.
3	Peak heat	T_P 260°C	30 sec. MAX

Ref. Solder paste: Sn/3.0Ag/0.5Cu

Ramp up rate: 3°C/s Max.

Ramp down rate: 6°C/s Max.

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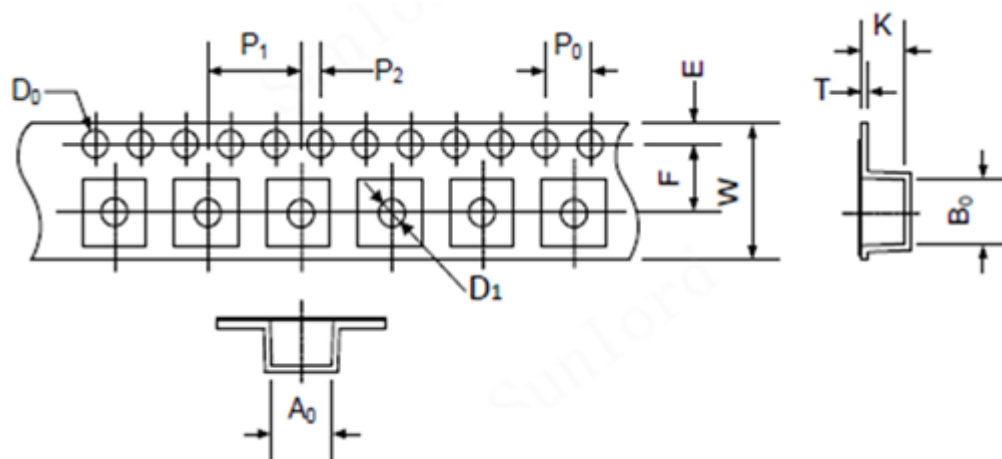
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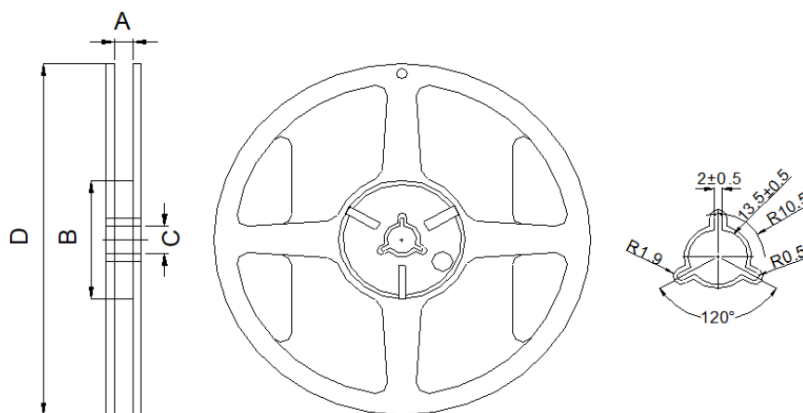
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Packaging

Tape & Reel: 2000 pcs/reel



A0	B0	W	E	F	P0	P1	P2	D0	T	K	D1
1.8±0.1	1.0±0.1	8.0±0.1	1.75±0.1	3.5±0.05	4.0±0.1	4.0±0.1	2.0±0.05	1.5±0.1	0.22±0.05	1.3±0.1	0.6±0.05



7"x8mm

Dimensions: mm

A	B	C	D
9.0±0.5	60.0±2.0	13.5±0.5	178.0±2.0

ATTENTION: Abracon LLC's products are Commercial-Off-The-Shelf (COTS), which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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