

Automotive Ferrite Chip Beads



AFBC-Q0603

Request Samples



Check Inventory



1.60 x 0.8 x 0.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- AEC-Q200 Qualified
- Operating Temperature: -55 ~ +150°C
- Wide range impedance
- Monolithic inorganic material construction
- Excellent heat resistance
- Current ratings up to 3A

Applications

- Electronic control Units (ECUs)
- Battery Management Systems (BMS)
- Powertrain system
- DC/AC Converters
- Industrial connectivity (IIoT)

Electrical Specifications

Part Number	Impedance	DC Resistance	Rated Current
Units	$\Omega \pm 25\%$	Ω Max.	mA Max.
Symbol	Z	R _{DC}	I _R
AFBC-Q0603-300	30	0.04	3000
AFBC-Q0603-800	80	0.04	3000
AFBC-Q0603-121	120	0.10	2000
AFBC-Q0603-151	150	0.10	2000
AFBC-Q0603-221	220	0.10	2000
AFBC-Q0603-301	300	0.2	1000
AFBC-Q0603-471	470	0.2	1000
AFBC-Q0603-601	600	0.2	1000

Test Conditions and Equipment

Impedance Test Frequency: 100MHz

I_R: Temperature Rise: 40°C Max. At Rated Current $\geq 1A$.

Operating Temperature: -55°C to +150°C (Including self-temperature rise)

Storage Temperature: <+40°C and RH 60% (Max).

AFBC-Q0603 is RoHS Compliant and Pb free

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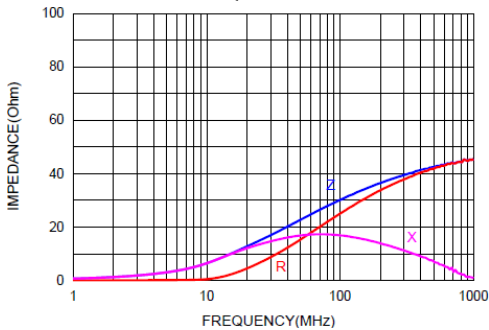
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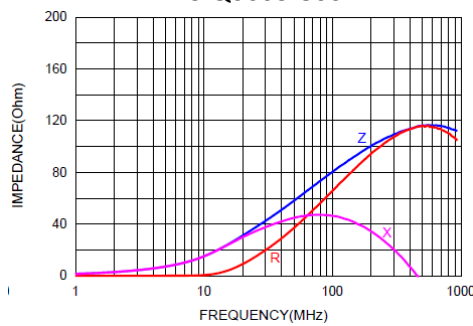
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Electrical Specifications (Cont'd)

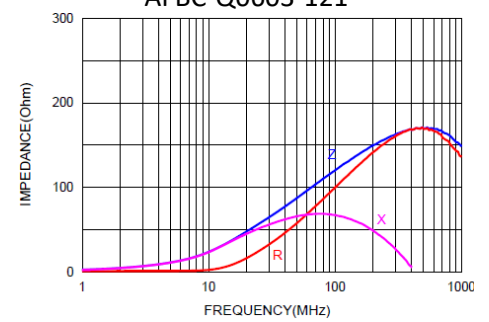
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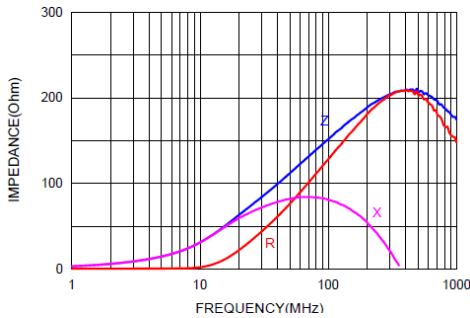
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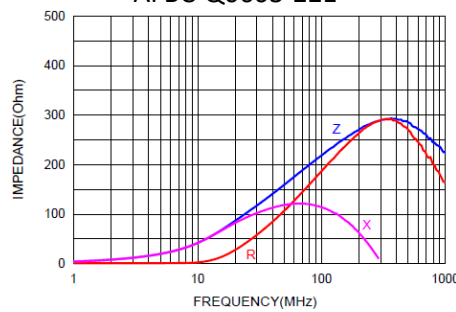
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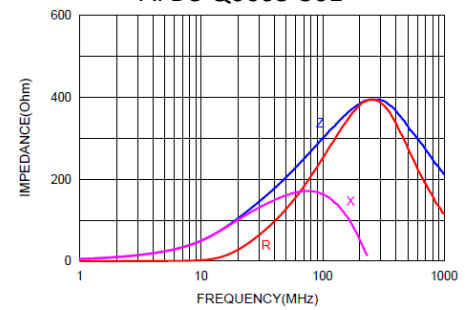
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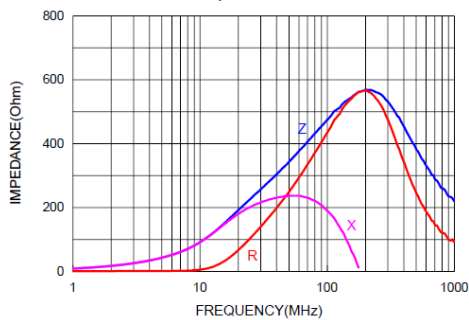
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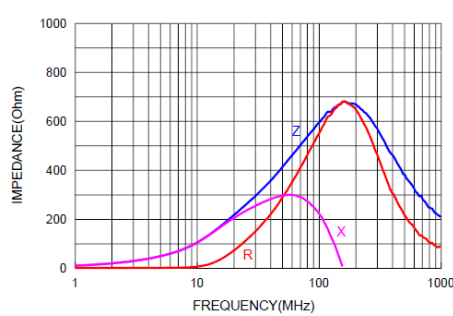
AFBC-Q0603-301



AFBC-Q0603-471



AFBC-Q0603-601



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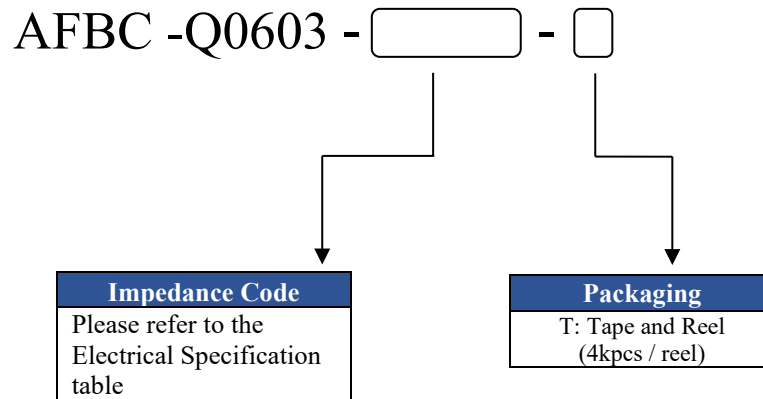


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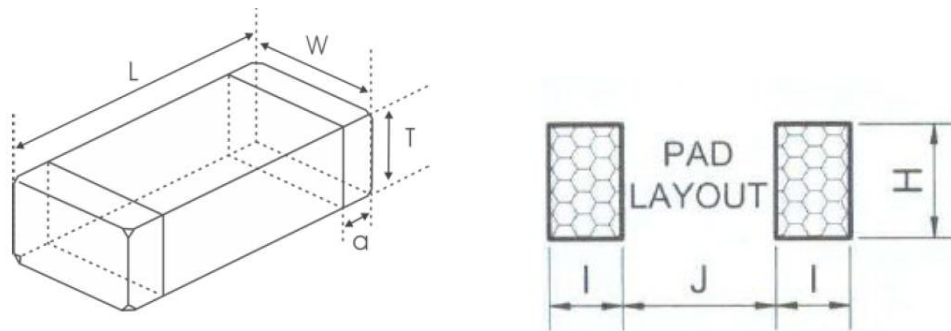


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Part Number Identification



Mechanical Specifications



L	W	T	a	H	I	J
1.60±0.15	0.80±0.15	0.80±0.15	0.30±0.20	0.95 Ref.	0.80 Ref.	0.85 Ref.

Dimension: mm

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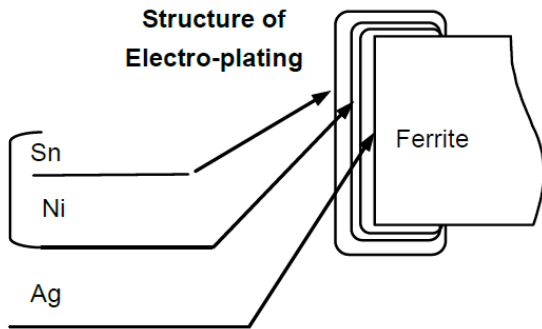


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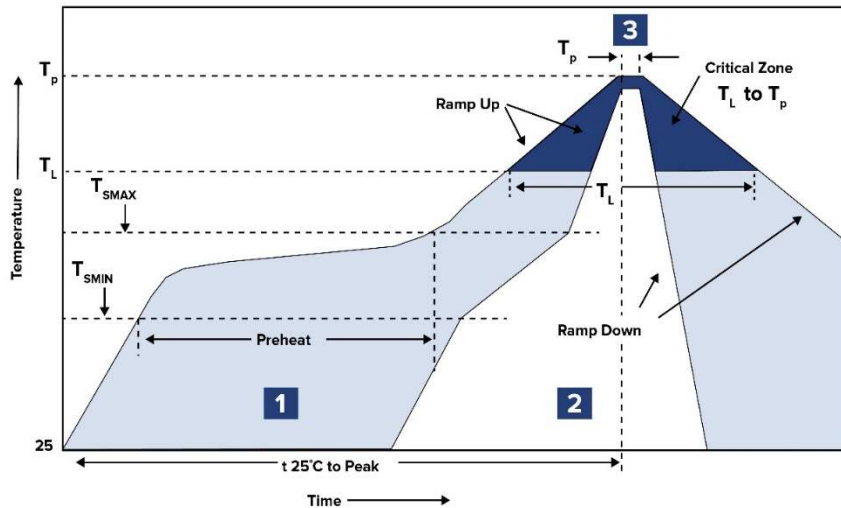
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Materials



	Structure Description
1	Ferrite for Beads
2	Internal Terminal Electrode: Ag (100%)
3	Electro-plating: Ni (100%)
4	External Electro-plating: Sn (100%)

Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 180 sec.
2	Reflow	T_L 245°C	20 ~ 40 sec.
3	Peak heat	T_P 260°C	10 sec. MAX

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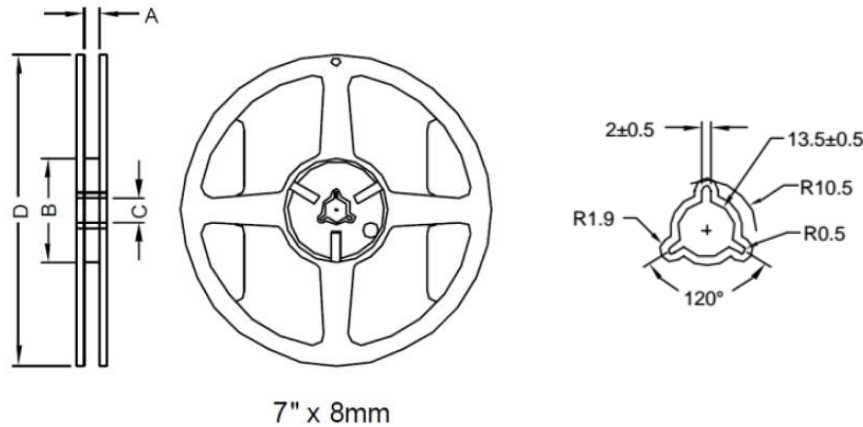
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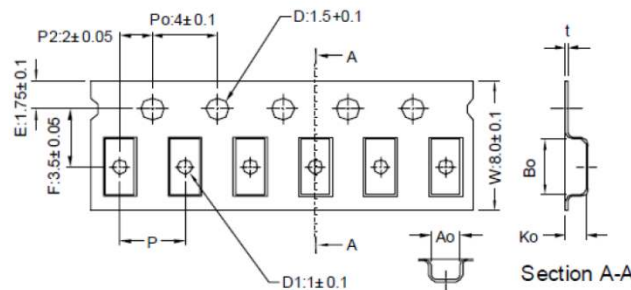
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Packaging

T= Tape and reel (4,000 pcs/reel)



Type	A	B	C	D
7"x8mm	9.0 ± 0.5	60.0 ± 2.0	13.5 ± 0.5	178.0 ± 2.0



Series	Bo	Ao	Ko	P
AFBC-Q0603	1.80 ± 0.05	0.96 ± 0.05	0.95 ± 0.05	4.00 ± 0.10

Dimension: mm

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