

Common Mode Choke CUW Series

Automotive
AEC-Q200

RoHS Compliant
Halogen Free
REACH Compliant

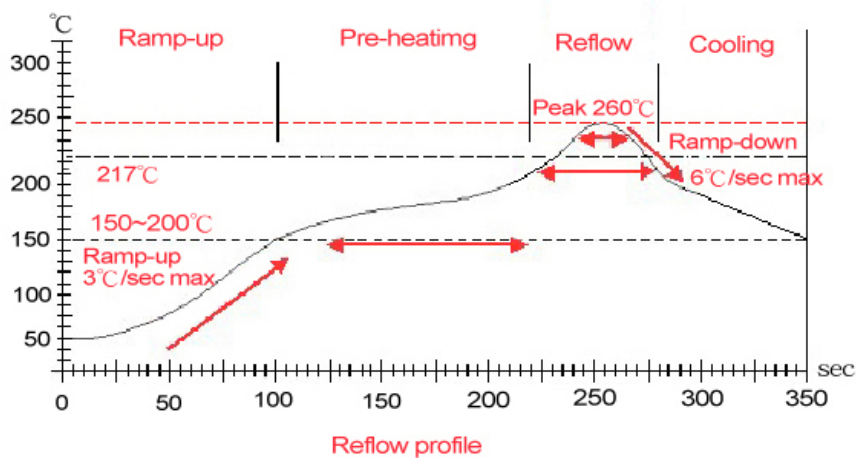


- Noise Suppression
- Unshield
- Wire Wound
- Ferrite
- General Signal line

Part Numbering

CUW	43	T	-	513	T	-	AU
Series Name	Dimensions Code (mm)	Category		Inductance (uH)	Tolerance		Internal Code
	43 4.5x3.2x2.6	T		513 51	T ±30%		
		M		104 100			

Recommend Reflow Profile



Lead-Free(LF)

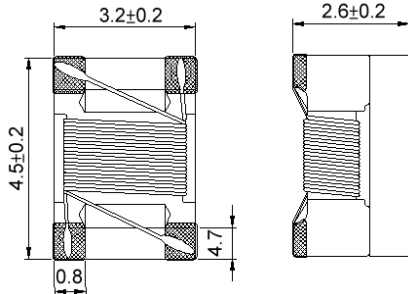
Item.	Ramp-up	Pre-heating	Reflow	Peak Temp	Cooling
Temp.scope	R.T. ~ 150°C	150°C ~ 200°C	225°C	260±5°C	Peak Temp. ~ 150°C
Time result	—	60 ~ 180sec	20 ~ 60sec	5 ~ 10sec	—

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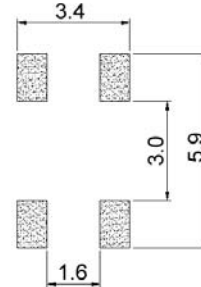
CUW43T - AU Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



unit:mm

■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq. (kHz)	Impedance (Ω)Min. (Ω)Typ.	Test Freq. (MHz)	RDC (Ω)Max.	I _{rms} (mA)Max	Rated Voltage (Vdc)Max.	Insulation Resistance (MΩ)Min.	Tolerance (±%)
CUW43T-113□-AU	11	100	300 600	10	0.6	250	50	10	30
CUW43T-223□-AU	22	100	500 1200	10	1	200	50	10	30
CUW43T-513□-AU	51	100	1000 2800	10	1	200	50	10	30
CUW43T-104□-AU	100	100	2000 5800	10	2	150	50	10	30

Note: When ordering, please specify tolerance code. Tolerance: T=±30%

1. Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
2. RDC: SINGLE WIRE TEST VALUE
3. I_{rms} for 40°C rise above 25°C ambient.
4. Measure Equipment:
 Z: HP4286A / HP4287A / AgilentE4991A
 L: HP4284A+HP42841A/HP4285A+HP42841A
 RDC: CHROMA MILLIOM METER MODE 16502
 I_{rms}: HP4284A+HP42841A/HP4285A+HP42841A
 Insulation Resistance: HP4339B

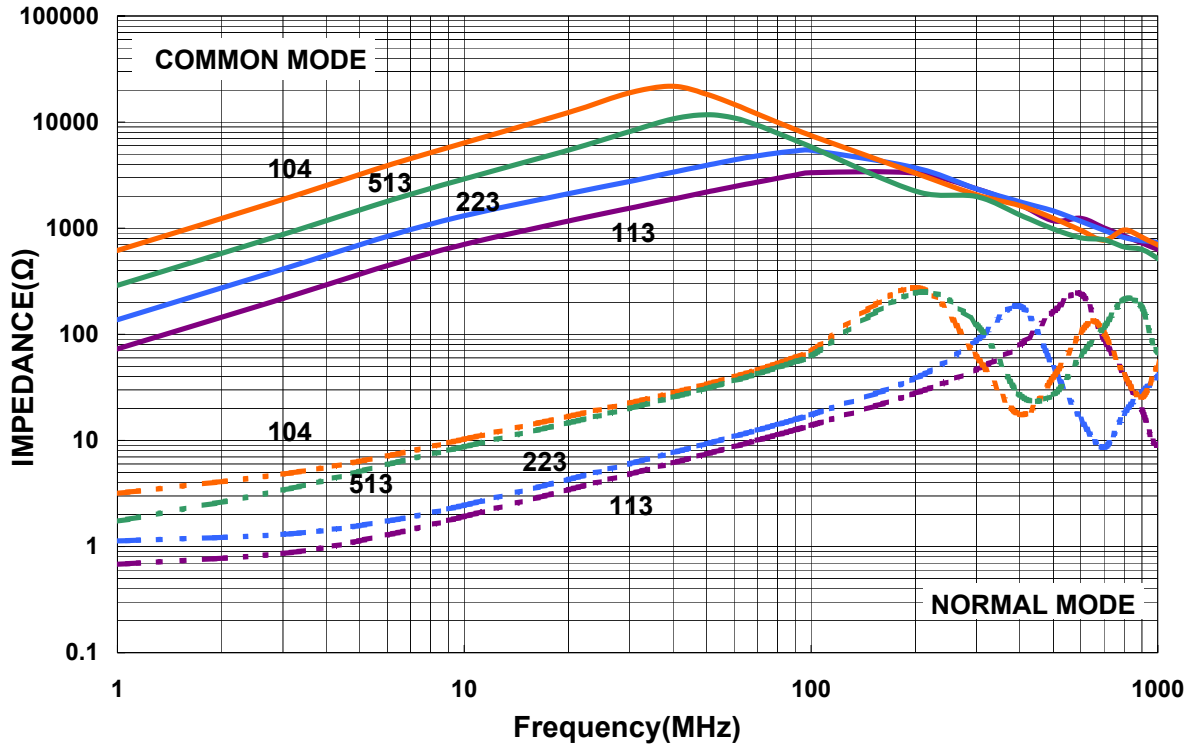
Common Mode Choke CUW Series

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CUW43T - AU Type

Characteristics Graph

Typical Impedance vs. Frequency Characteristics



"Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without advance notice. Please contact our sales department before ordering."

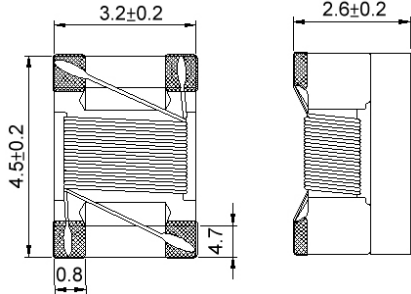
unit:mm

Common Mode Choke CUW Series

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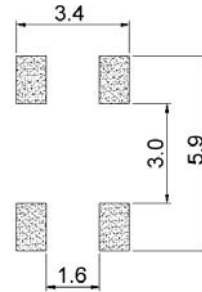
CUW43M - AU Type

Dimensions



unit:mm

Recommended Land Pattern



unit:mm

Electrical Characteristics

Part No.	Inductance (uH)	Test Freq. (MHz)	RDC (Ω)Max.	I _{rms} (mA)Max.	Rated Voltage (Vdc)Max.	Insulation Resistance (MΩ)Min.	Tolerance (±%)
CUW43M-113□-AU	11	0.1	0.5	360	50	10	30
CUW43M-223□-AU	22	0.1	0.6	310	50	10	30
CUW43M-513□-AU	51	1	1	230	50	10	30
CUW43M-104□-AU	100	1	2	200	50	10	30

Note: When ordering, please specify tolerance code. Tolerance: T=±30%

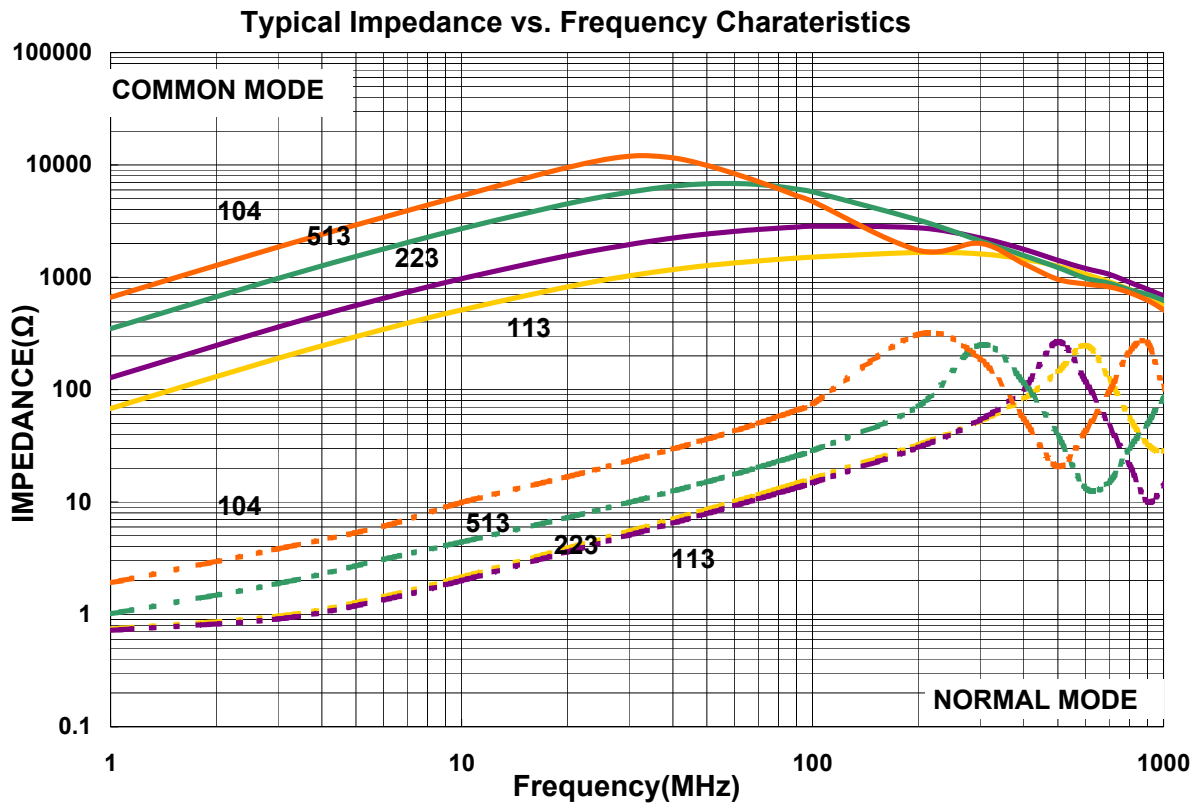
1. Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
2. RDC: SINGLE WIRE TEST VALUE
3. I_{rms} for 40°C rise above 25°C ambient.
4. Measure Equipment:
 L: HP4284A+HP42841A/HP4285A+HP42841A
 RDC: CHROMA MILLIOM METER MODE 16502
 I_{rms}: HP4284A+HP42841A/HP4285A+HP42841A
 Insulation Resistance: HP4339B

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CUW43M - AU Type

■ Characteristics Graph

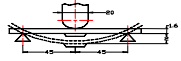


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Reliability

1-1.Mechanical Performance

	Item	Specification	Test Method
1-1-1	Board Flex	The forces applied on the right conditions must not damage the terminal electrode and the ferrite.	Test device shall be soldered on the substrate Substrate Dimension: 100x40x1.6mm Deflection: 2.0mm Keeping Time: 60 sec 
1-1-2	Terminal Strength	The chip must not damage the terminal electrode and the ferrite.	Appendix 1 Note(AEC-Q200-005):Force of 1.8 kg for 60 seconds.
1-1-3	Solderability	The electrodes shall be at least 95% covered with new solder coating.	Pre-heating: 150°C, 1min Solder Composition: Sn/3.0Ag/0.5Cu Solder Temperature: 245±5°C Immersion Time: 4±1sec
1-1-4	Resistance to Soldering Heat	Appearance:No damage Inductance change shall be within ±10%.	Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5 Solder Temperature: 260±5°C Immersion Time: 10±1sec
1-1-5	Resistance to Solvents	There must be no change in appearance or obliteration of marking.	Inductors must withstand 6 minutes of alcohol or water.
1-1-6	Mechanical Shock	The forces applied on the right conditions must not damage the terminal electrode and the ferrite.	Pulse shape : Half-sine waveform Impact acceleration : 100 g Pulse duration : 6 ms Number of shocks : 18 shocks (3 shocks for each face) Orientation : Bottom, top, left, right, front and rear faces
1-1-7	Vibration	Appearance:No damage Inductance change shall be within ±10%.	Vibration waveform: Sine waveform Vibration frequency: 10Hz~2000Hz Vibration acceleration: 5g Sweep rate: 0.764386octave/minute Duration of test: 12 cycles each of 3 orientations 20 minutes for each cycle Vibration axes: X, Y & Z

1-2.Environmental Performance

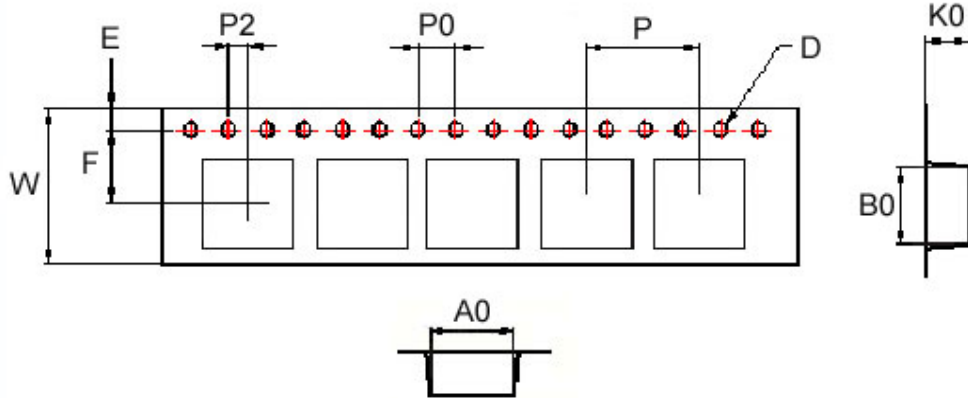
No	Item	Specification	Test Method
1-2-1	High Temperature Exposure (Storage)	Appearance:No damage (for microscope of CASTOR MZ-45 20X)Inductance change shall be within ±10%.	Temperature: 125±3°C Time: 1000hrs Measured after exposure in the room condition for 24hrs
1-2-2	Operational Life		Temperature: 125±2°C Applied Current : Rated Current Time: 1000± 24 hrs Measured after exposure in the room condition for 24hrs
1-2-3	Biased Humidity		Temperature: 85±2°C Relative Humidity: 85% Time: 1000hrs Measured after exposure in the room condition for 24hrs
1-2-4	Temperature Cycling		Total cycles: 1000 cycles Temperature Cycling Test Conditions : -40 to +125 °C Soak Mode Condition : 30 minutes Measured after exposure in the room condition for 24hrs
1-2-5	ESD		Test mode : Contact Discharge Discharge level : ±6KV, Discharge interval : 1 second Polarity of the output voltage : Positive and negative Number of discharge : Discharge +/- for 1 time for the 2 test points. Test Mode : Air Discharge Discharge level : ±12KV, ±16KV, ±25KV Discharge interval : < 5 seconds Polarity of the output voltage : Positive and negative Number of discharge : Discharge +/- for 1 time for the 1~2 test points.

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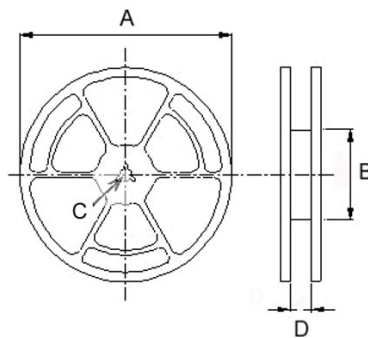
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■ Packaging

Tape Dimensions



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions										Reel Dimensions				Quantity
	A0	B0	K0	D	E	F	W	P	P0	P2	A	B	C	D	PCS / REEL
CUW43	3.6	4.9	2.7	1.5	1.75	5.5	12	8	4	2	330	100	13	13.4	2500