

Wire-wound Common Mode Filter



◆ Features

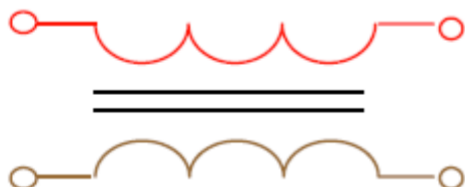
- 1、Powerful component with composite co-fired material to solve EMI problem for high-speed differential signal transmission line as USB, IEEE1394 and LVDS, without distortion to high speed signal transmission
- 2、High coupling constant : 0.99
- 3、Small size and low profile
- 4、Various common mode impedance items of 67 to 220 ohm can be used, considering noise level and signal frequency
- 5、Small dimension enable higher density packaging
- 6、RoHS Compliant.



◆ Application

- 1、Common mode noise suppression of signal lines in high speed and high density digital equipment;
- 2、USB2.0/3.0 of PC, peripheral equipments, small digital AV equipments, etc.

◆ Equivalent Circuit Diagram

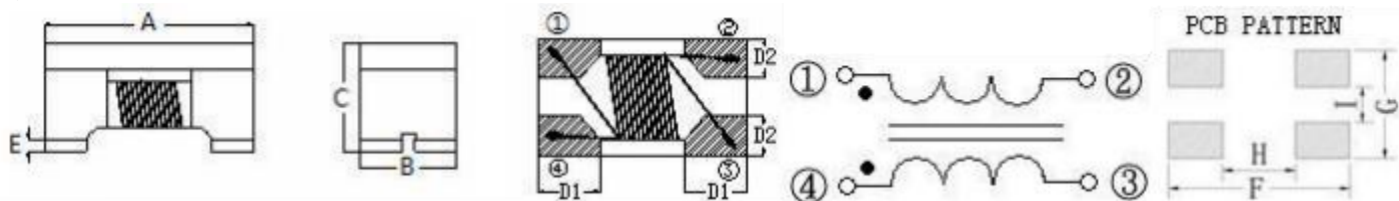


◆ PRODUCT IDENTIFICATION

SMW	2012	H	900	B	T	E
(1)	(2)	(3)	(4)	(5)	(6)	(7)

- (1) Series Type
- (2) Chip Size (mm) :Length X Width
- (3) Material type : With magnetic shield(B/D/H)
- (4) Nominal Impedance:120=12Ω;
900=90Ω
- (5) Rated Current: A=250mA; B=300mA;C=350mA;
D=400mA;E=420mA
- (6) Company Code
- (7) Packaging: P – Embossed paper tape, 7" reel
E – Embossed plastic tape, 7" reel
T – Tape & reel

◆ Dimensions Unit:mm



Series	A	B	C	E	D1	D2	F	G	I	H
SMW1608	1.6±0.1	0.8±0.1	1.1±0.1	0.1Max	0.33Typ	0.25Typ	1.89Typ	0.85Typ	0.73Typ	0.25Typ
SMW2012	2.0±0.2	1.2±0.2	1.2±0.2	0.2±0.1	0.55Typ	0.46Typ	2.60Typ	1.25Typ	0.40Typ	0.80Typ

◆ Specifications

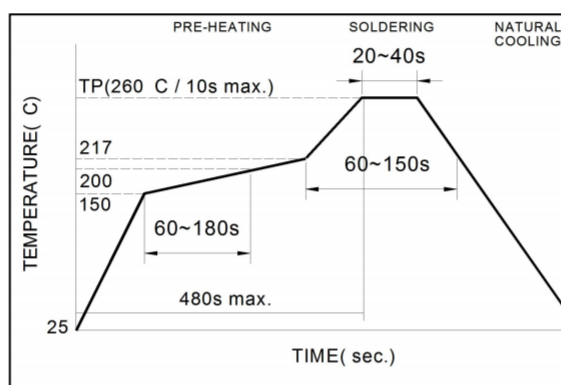
Part Number	Common mode Impedance Z(Ω) at 100MHz	DC Resistance (Ω) max.	Rated Current (mA)	Rated Volt. (Vdc)	IR (Ω) min.
SMW1608H Series					
SMW1608H220DTE	22±25%	0.11	500	20	10M
SMW1608H900BTE	90±25%	0.25	300	20	10M
SMW2012H Series					
SMW2012H500DTE	50±25%	0.25	400	50	10M
SMW2012H670DTE	67±25%	0.25	400	50	10M
SMW2012H750DTE	75±25%	0.30	400	50	10M
SMW2012H900BTE	90±25%	0.35	330	50	10M
SMW2012H121BTE	120±25%	0.30	370	50	10M
SMW2012H181BTE	180±25%	0.35	330	50	10M
SMW2012H221BTE	220±25%	0.40	300	50	10M
SMW2012H261BTE	260±25%	0.40	300	50	10M
SMW2012H361ATE	360±25%	0.45	280	50	10M
SMW2012H601ATE	600±25%	0.60	220	50	10M
SMW2012H801BTE	800±25%	0.88	300	50	10M
SMW2012H901ATE	900±25%	0.90	150	50	10M
SMW2012H102ATE	1000±25%	1.30	150	50	10M

◆ General Technical Data

- a. Rating DC current: Temperature rise(ΔT) is 40°C approximately at Irms.
- b. Operating temp.: -40°C ~ +105°C
- c. Storage temp.: -10°C ~ +40°C R.H.: 65% Max
- d. Moisture sensitivity level (MSL) 2 (1 year floor life at <30°C/65% relative humidity)

◆ Soldering Conditions

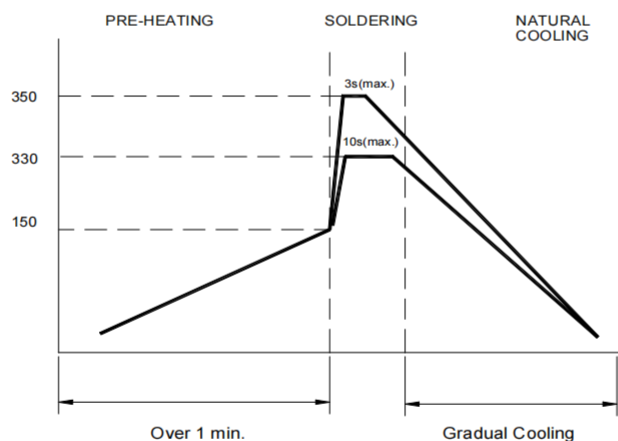
**Figure 1.
Re-flow Soldering
(Lead Free)**



Note:

- Preheat circuit and products to 150°C
- 260°C tip temperature (max)
- Reflow times: no more than 2 times
- Solder paste thickness: the best 0.08mm is, but max is 0.1mm

**Figure 2.
Hand Soldering**

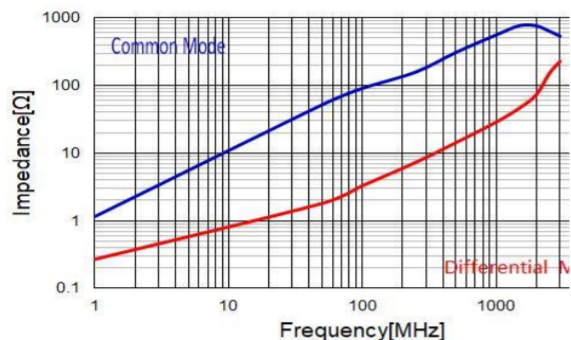


Note:

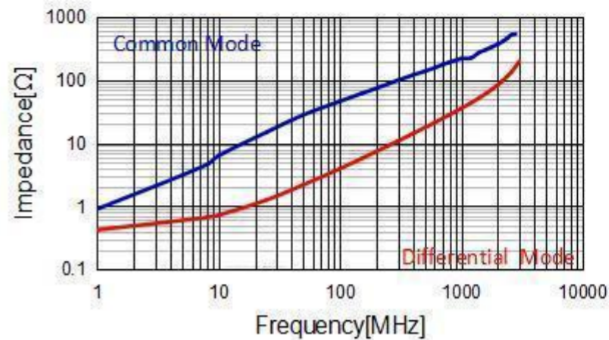
- Use a 20 watt soldering iron with tip diameter of 1.0mm
- Limit soldering time to 3 sec.

◆ Electrical Characteristic Curve

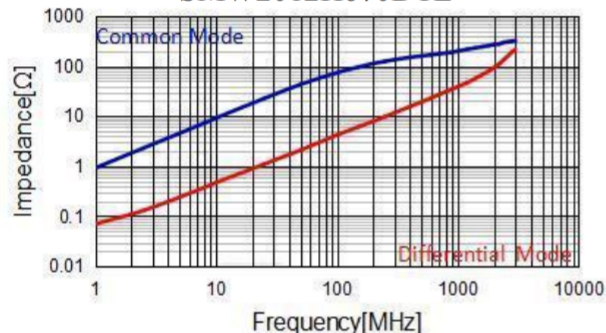
SMW1608H900BTE



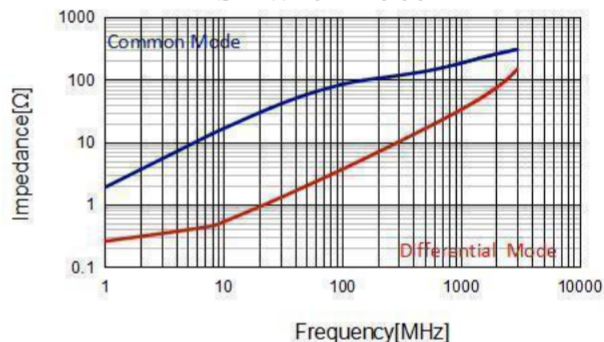
SMW2012H500DTE



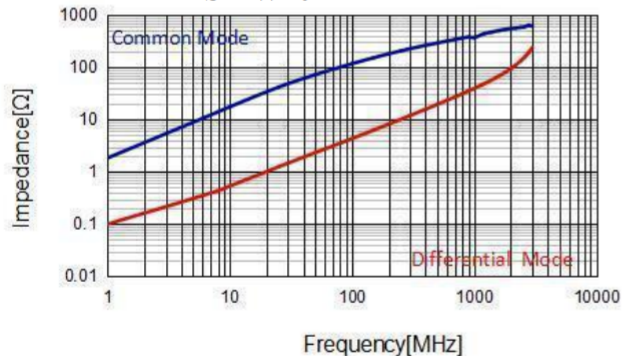
SMW2012H670DTE



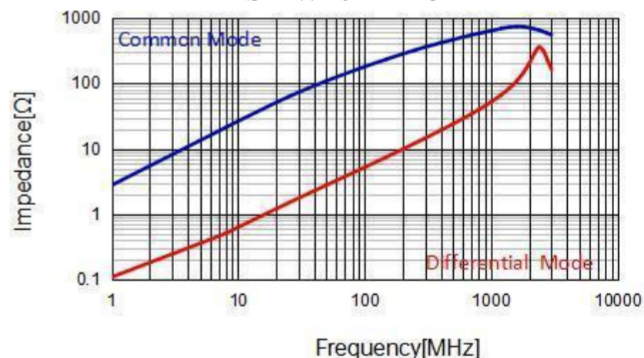
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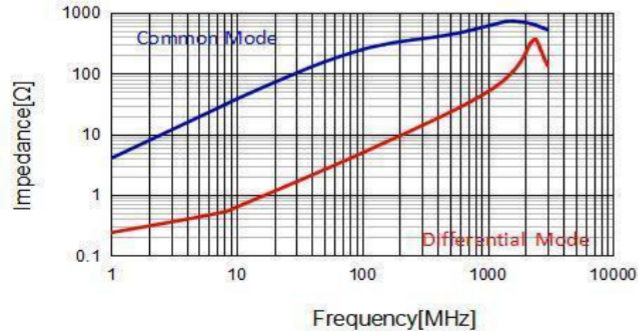
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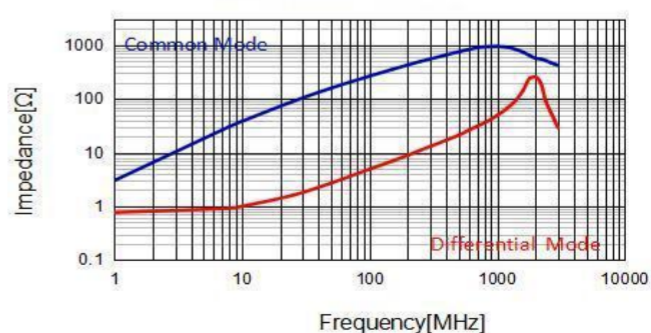
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SMW2012H221BTE

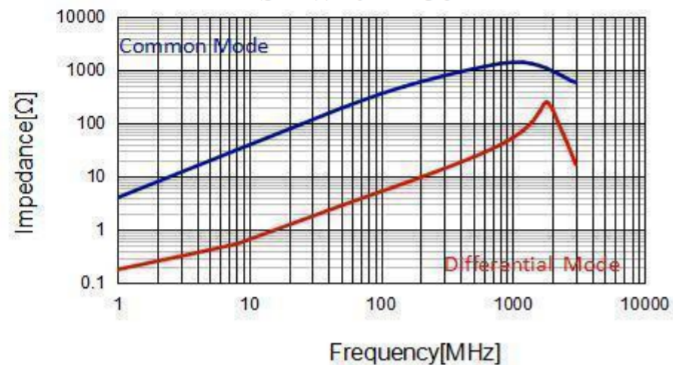


SMW2012H261BTE

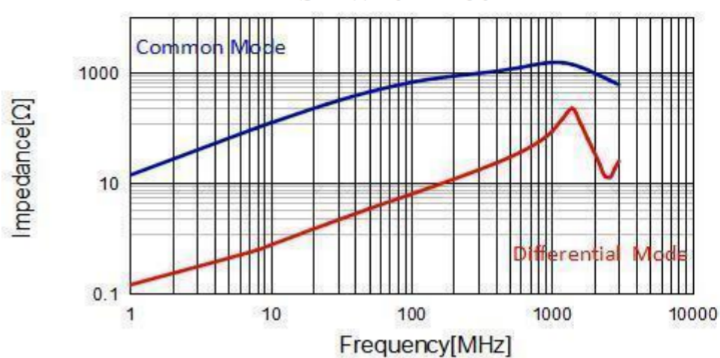


◆ Electrical Characteristic Curve

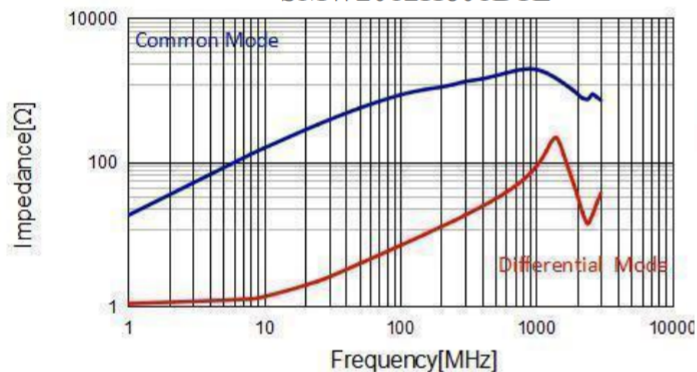
SMW2012H361ATE



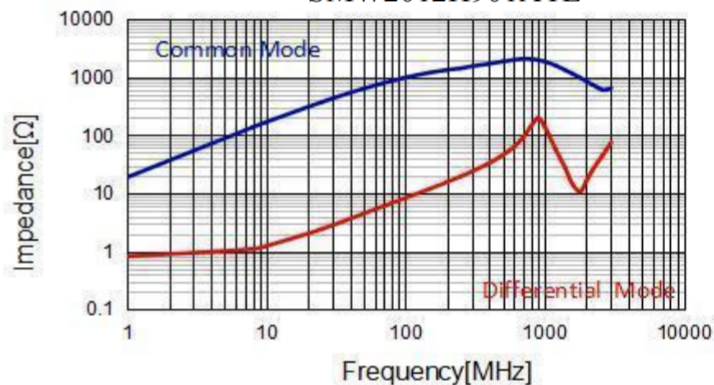
SMW2012H601ATE



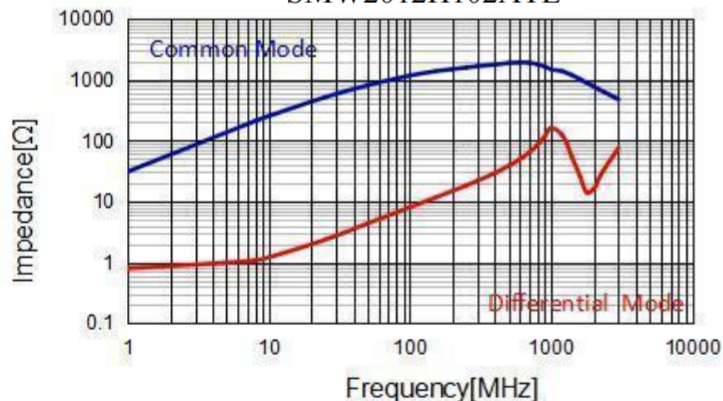
SMW2012H801BTE



SMW2012H901ATE



SMW2012H102ATE



◆ Package

Size EIA (EIA)	1608(0603)	2012 (0805)
Standard Packing Quantity (pcs / reel)	2,000	2,000