

# Wire Wound Chip Ferrite Inductors MLW1608RD Series

## FEATURES

- Small chip suitable for surface mounting
- Large inductance with ferrite material
- Operate temperature range ....  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$  (Including self temp. rise)
- RoHS compliant

## APPLICATIONS

- Mobile phones and other electronic devices
- Bluetooth modules and TWS earphones

## Explanation of Part Number

MLW 1608 RD- 1R0 M T

1 2 3 4 5 6

- ◆ 1:Product Series:Wire Wound Chip Ceramic Inductors
- ◆ 2:Dimensions:
- ◆ 3: Material Code : RD Type
- ◆ 4:Nominal Inductance:1R0==>1.0uH
- ◆ 5.Inductance Tolerance:M $\pm$ 20%
- ◆ 6:Packing :Tape & Reel

## Dimensions: [mm]



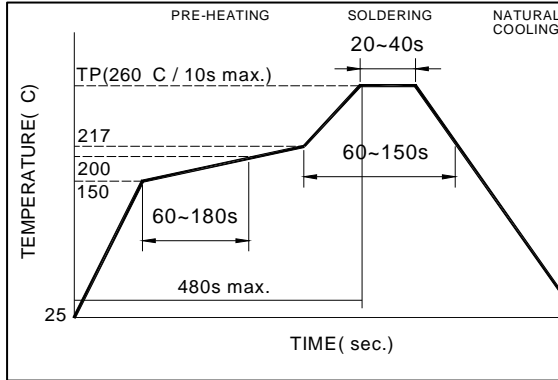
L(MAX)	W(MAX)	T(MAX)	E(Typ.)	F(Typ.)	D(Typ.)
1.80	1.25	1.10	0.64	1.02	0.64

**Electrical Characteristics List****MLW1608RD Series**

NO.	Part Number	L ( $\mu$ H)	Q (Typ)	SRF (MHz)Typ	Rdc $\pm$ 30% ( $\Omega$ )	Irms (mA)Typ	Isat (mA)Typ
1	MLW1608RD-1R0MT	1@1MHZ	10@1MHZ	350.00	0.14	900.00	800.00
2	MLW1608RD-2R2MT	2.2@1MHZ	10@1MHZ	90.00	0.30	600.00	580.00
3	MLW1608RD-4R7MT	4.7@1MHZ	10@1MHZ	57.00	0.46	500.00	450.00
4	MLW1608RD-6R8MT	6.8@1MHZ	9@1MHZ	25.00	0.67	500.00	410.00
5	MLW1608RD-100MT	10@1MHZ	9@1MHZ	25.00	1.00	380.00	270.00
6	MLW1608RD-150MT	15@1MHZ	9@1MHZ	25.00	1.42	350.00	220.00
7	MLW1608RD-220MT	22@1MHZ	8@1MHZ	20.00	2.46	270.00	180.00

**SOLDERING CONDITIONS**

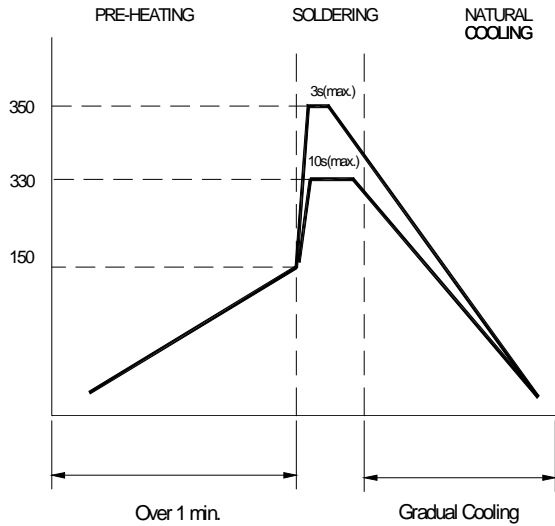
**Figure 1.  
Re-flow  
Soldering  
(Lead Free)**



Note:

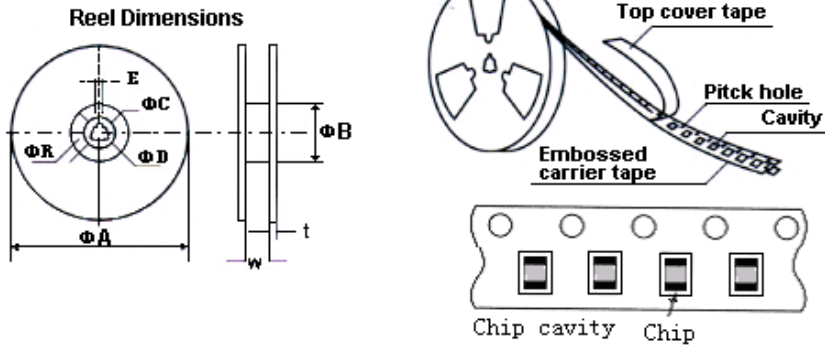
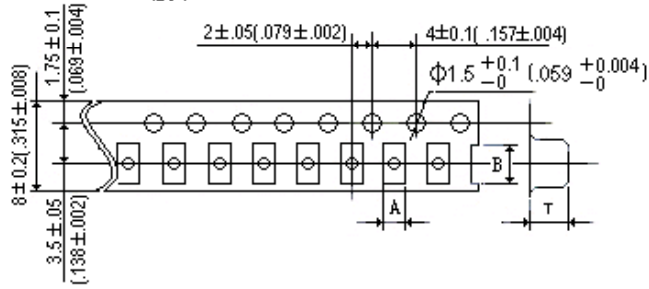
- Preheat circuit and products to 150 °C
- 260°C tip temperature (max)
- Reflow times: no more than 2 times
- Solder paste thickness: the best 0.08mm is ,but max is 0.1mm

**Figure 2.  
Hand  
Soldering**

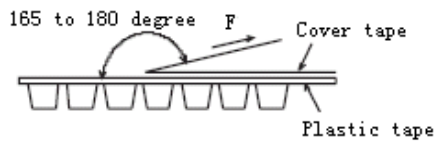


Note:

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

**PACKAGING(unit: mm)**

**胶带 POLYSTYRENE TAPE**


Peeling off force  
 Full strength  
 0402~1210:20g~80g  
 Speed of peeling off:  
 300mm/min±10%



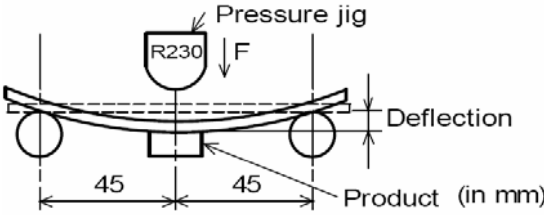
	A	B	T
	Typ	Typ	Typ
胶带	1.15	1.83	0.95

$\Phi A$	$\Phi B$	$\Phi C$	$\Phi D$	E	W	t	
Typ	Typ	Typ	Typ	Typ	Typ	Typ	
178	60	13	21	2	8.4	2	

包装数量 (PACKAGING QUANTITY): 4000Pcs/盘

**RELIABILITY TEST**

TEST ITEM	SPECIFICATION	TEST CONDITION
Rating current	According to product specifications	Current sources:33010D
Inductance	According to product specifications	Test Frequency:0.252~250MHz Test Equipment:HP4291A、HP4286A、HP4287A、HP4284A Test Fixture:16193Aor16334A
Q	According to product specifications	Test Frequency:0.252~1500MHz Test Equipment:HP4291A、HP4286A、HP4287A、Test Fixture:16193Aor16334A
RDC	According to product specifications	Test Equipment:HP4263B
SRF	According to product specifications	Test Equipment:HP4291A Test Fixture:16193A
Solderability	The metalized area must have more then 90%of solder coverage	Soldering Temp:230±5℃ Dipping time:5±1S
Resistance to soldering heat	No evidence of mechanical damage The mealized arer must have more then 75%of solder coverage Inductance change,less than±5% Q change less than±10%	Soldering Temp:260±5℃ Dipping time:10±1S
Thermal Shock	No evidence of mechanical damage, Inductance change less than±5%, Q change less than±10%	A cycle contain:Step1:-40℃, 30Min Step 2:85℃, 30Min Cycle Times:10

TEST ITEM	SPECIFICATION	TEST CONDITION
High Temperature Storage	No evidence of mechanical damage, Inductance change less than $\pm 5\%$ , Q change less than $\pm 10\%$	Test Temperature: $125\pm 2^{\circ}\text{C}$ (Ceramic core) $85\pm 2^{\circ}\text{C}$ (Ferrite core) Test Time: $96\pm 2$ Hours
Low Temperature Storage	No evidence of mechanical damage, Inductance change less than $\pm 5\%$ , Q change less than $\pm 10\%$	Test Temperature: $-40\pm 2^{\circ}\text{C}$ Test Time: $96\pm 2$ Hours
Moisture Resistance	No evidence of mechanical damage, Inductance change less than $\pm 5\%$ , Q change less than $\pm 10\%$	Test Temperature: $50\pm 2^{\circ}\text{C}$ Test Time:100Hours relative humidity: $90\sim 95\%$
Vibration	No evidence of mechanical damage, Inductance change less than $\pm 5\%$ , Q change less than $\pm 10\%$	Amplitude:1.5mm X、Y、Z each direction for 1Hour and 45min Frequency range: $10\sim 55\sim 10\text{Hz}$ (min)
Component Adhesion	No evidence of mechanical damage No evidence of peel off or broken Keep continuity of FSnding	Force:2Kg Test Time: $5\pm 1$ sec
Resistance to bend	No evidence of mechanical damage	Camber:20mm Test Board:Glass-Epoxy board Thickness:8mm 
Life	No evidence of mechanical damage, Inductance change less than $\pm 5\%$ , Q change less than $\pm 10\%$	Test Temperature: $85\pm 2^{\circ}\text{C}$ Test Time:1000Hours FSth rating current

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