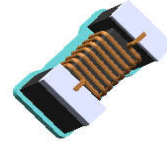


# Wire Wound Chip Ferrite Inductors MLW-RF Series

## 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

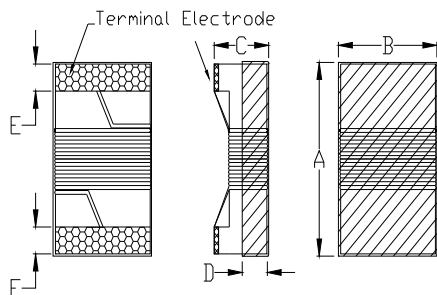
## Explanation of Part Number

MLW 1608 RF 1R0 K T

1 2 3 4 5 6

- ◆ 1:Product Series:Wire Wound Chip Ceramic Inductors
- ◆ 2:Dimensions:
- ◆ 3: Material Code : RF Ferrite
- ◆ 4:Nominal Inductance:1R0==>1.0uH
- ◆ 5.Inductance Tolerance:K $\pm$ 10%,M $\pm$ 20%
- ◆ 6:Packing :Tape & Reel

## Dimensions: [mm]



Series	A	B	C	D Typ.	E Typ.
MLW1608RF	1.80 Max	1.25 Max	1.20 Max	1.02	0.30
MLW2012RF	2.29 Max	1.73 Max	1.52 Max	1.28	0.48

## Electrical Characteristics List

### MLW1608RF Series

Part Number	Inductance	Tolerance	L Test Freq.	DC Resistance	Typ. Rated Current	Typ. Self-resonant Frequency
Units	μH	-	MHz	Ω	mA	MHz
Symbol	L	-	Freq.	DCR	I <sub>r</sub>	S.R.F
MLW1608RF-1R0□T	1.0	K,M	7.9	0.32±30%	860	390
MLW1608RF-1R5□T	1.5	K,M	7.9	0.40±30%	720	160
MLW1608RF-1R8□T	1.8	K,M	7.9	0.43±30%	640	121
MLW1608RF-2R2□T	2.2	K,M	7.9	0.56±30%	600	103
MLW1608RF-2R7□T	2.7	K,M	7.9	0.62±30%	540	72
MLW1608RF-3R3□T	3.3	K,M	7.9	0.70±30%	500	66
MLW1608RF-3R9□T	3.9	K,M	7.9	0.83±30%	460	61
MLW1608RF-4R7□T	4.7	K,M	7.9	0.97±30%	420	51
MLW1608RF-5R6□T	5.6	K,M	7.9	1.10±30%	380	47
MLW1608RF-6R8□T	6.8	K,M	7.9	1.50±30%	340	43
MLW1608RF-8R2□T	8.2	K,M	7.9	1.68±30%	300	40
MLW1608RF-100□T	10	K,M	2.5	1.85±30%	280	36
MLW1608RF-120□T	12	K,M	2.5	2.28±30%	260	32
MLW1608RF-150□T	15	K,M	2.5	2.60±30%	240	29
MLW1608RF-180□T	18	K,M	2.5	2.90±30%	220	28
MLW1608RF-220□T	22	K,M	2.5	3.61±30%	200	24
MLW1608RF-270□T	27	K,M	2.5	5.20±30%	140	20
MLW1608RF-330□T	33	K,M	2.5	6.60±30%	120	15
MLW1608RF-470□T	47	K,M	2.5	9.65±30%	100	14

### MLW2012RF Series

Part Number	Inductance	Tolerance	L Test Freq.	DC Resistance	Typ. Rated Current	Typ. Self-resonant Frequency
Units	μH	-	MHz	Ω	mA	MHz
Symbol	L	-	Freq.	DCR	I <sub>r</sub>	S.R.F
MLW2012RF-R47□T	0.47	K,M	7.9	0.12±30%	1500	850
MLW2012RF-R68□T	0.68	K,M	7.9	0.15±30%	1300	765
MLW2012RF-1R0□T	1.0	K,M	7.9	0.13±30%	1300	208
MLW2012RF-1R2□T	1.2	K,M	7.9	0.16±30%	1270	159
MLW2012RF-1R5□T	1.5	K,M	7.9	0.17±30%	1260	159
MLW2012RF-1R8□T	1.8	K,M	7.9	0.20±30%	1080	112
MLW2012RF-2R2□T	2.2	K,M	7.9	0.22±30%	1040	87
MLW2012RF-2R7□T	2.7	K,M	7.9	0.25±30%	1040	72
MLW2012RF-3R3□T	3.3	K,M	7.9	0.28±30%	1020	70
MLW2012RF-3R9□T	3.9	K,M	7.9	0.38±30%	960	61
MLW2012RF-4R7□T	4.7	K,M	7.9	0.43±30%	840	51
MLW2012RF-5R6□T	5.6	K,M	7.9	0.50±30%	800	47
MLW2012RF-6R8□T	6.8	K,M	7.9	0.68±30%	700	46
MLW2012RF-8R2□T	8.2	K,M	7.9	0.73±30%	680	33

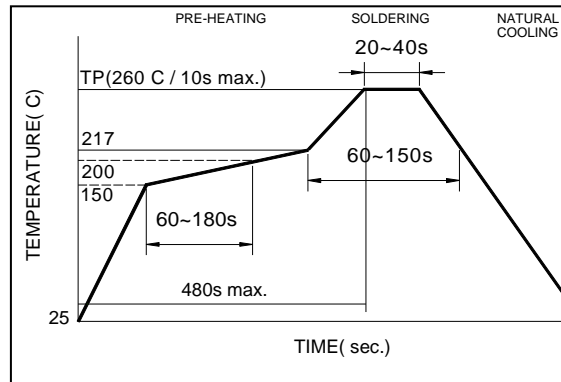
## Wire Wound Chip Ferrite Inductors MLW-RF Series

Part Number	Inductance	Tolerance	L Test Freq.	DC Resistance	Typ. Rated Current	Typ. Self-resonant Frequency
Units	μH	-	MHz	Ω	mA	MHz
Symbol	L	-	Freq.	DCR	I <sub>r</sub>	S.R.F
MLW2012RF-100 □T	10	K,M	2.5	0.85±30%	560	31
MLW2012RF-120 □T	12	K,M	2.5	0.90±30%	460	30
MLW2012RF-150 □T	15	K,M	2.5	1.40±30%	380	28
MLW2012RF-180 □T	18	K,M	2.5	1.55±30%	360	27
MLW2012RF-220 □T	22	K,M	2.5	1.76±29%	340	20
MLW2012RF-270 □T	27	K,M	2.5	2.00±30%	300	17
MLW2012RF-330 □T	33	K,M	2.5	2.35±30%	300	17
MLW2012RF-470 □T	47	K,M	2.5	3.40±30%	280	15
MLW2012RF-560 □T	56	K,M	2.5	4.42±30%	240	10
MLW2012RF-680 □T	68	K,M	2.5	4.45±30%	240	10
MLW2012RF-820 □T	82	K,M	2.5	7.50±30%	180	10
MLW2012RF-101 □T	100	K,M	1.0	7.50±30%	180	9

※ □: Please specify the inductance tolerance code (K=±10%, M=±20%).

## SOLDERING CONDITIONS

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

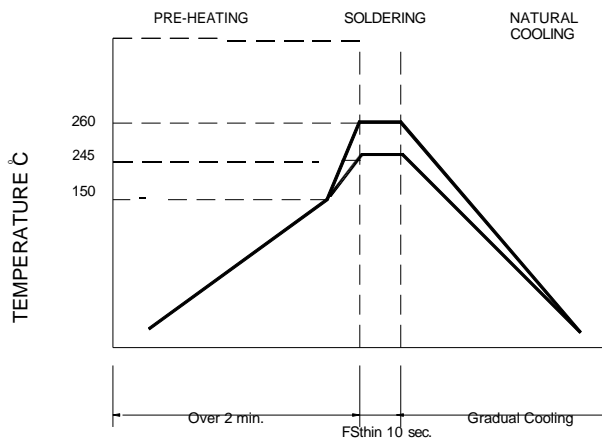


Note:

Preheat circuit and products to 150°C

280°C tip temperature (max)

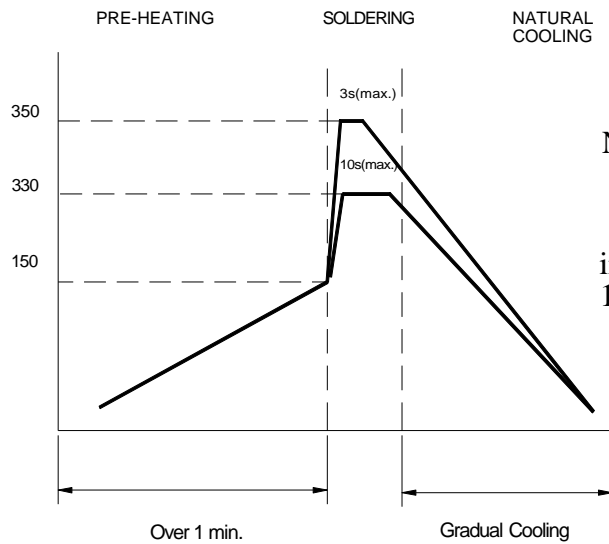
**Figure 2.  
Wave Soldering**



Note:

Never contact the ceramic FSth the iron tip

**Figure 3.  
Hand Soldering**



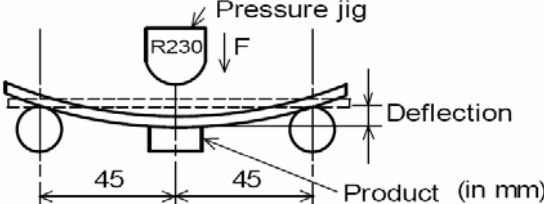
Note:

Use a 20 watt soldering iron FSth tip diameter of 1.0mm

Limit soldering time to 3 sec.

**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:90~95%
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:10~55~10Hz(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

## Packaging

(PACKAGING QUANTITY)

规格	0402	0603	0805	1008	1210
数量(pcs)	10000	4000	2000	2000	2000

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