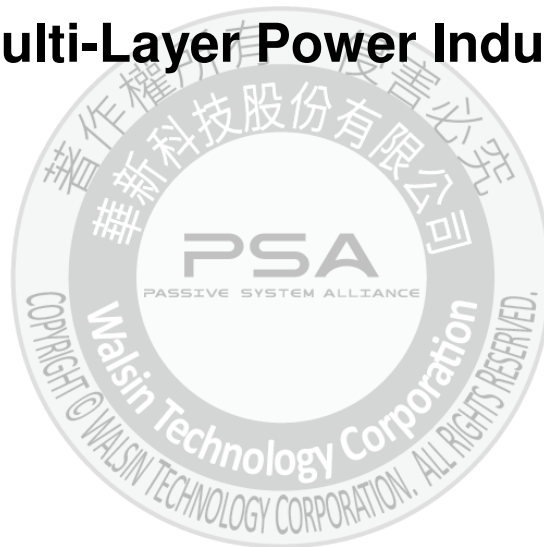


APPROVAL SHEET

WLFM160808_P
WLFM201205_P
Multi-Layer Power Inductor



*Contents in this sheet are subject to change without prior notice.

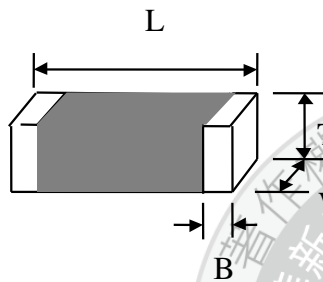
Features

1. General purpose chip ferrite power inductor for high integration electronics device.
2. Ceramic structure provides high reliability · high productivity.
3. Low DC resistance with high current.
4. RoHS compliance.

Applications

1. DC line filter, DC/DC inductor.
2. Suitable for DVD,DSC,PND,PC,NB,Power Line.

Shape and Dimension



Unit: mm (inches)

WLFM Series	L	W	T	B (Min/Max)
WLFM160808*P	1.6±0.15	0.8±0.15	0.8±0.15	0.3±0.2
WLFM201205*P	2.0±0.15	1.25±0.15	0.5±0.05	0.5±0.2

Ordering Information

WL	FM	1608	08	M	R47	P	P
Product Code	Series	Dimensions	Thickness	Tolerance	Value	Packing Code	P
WL: Inductor	Multilayer	1608:EIA 0603 2012:EIA 0805	05 = 0.5mm 08 = 0.8mm	M: ± 20%	R47=0.47uH 2R2=2.2uH	P=7" Reeled (Embossed tape)	P=General

Electrical Characteristics

● WLFM160808 series (EIA 0603)

Walsin Part Number	L(uH) Inductance	Tolerance	Measuring Frequency (MHz)	DCR ±25% (Ω)	Rated Current (mA)	SRF (MHz)
WLFM160808MR24PP	0.24	M	1	0.1	1200	90
WLFM160808MR47PP	0.47	M	1	0.1	1200	70
WLFM160808M1R0PP	1.0	M	1	0.2	950	60
WLFM160808M2R2PP	2.2	M	1	0.3	750	50

● WLFM201205 series (EIA 0805)

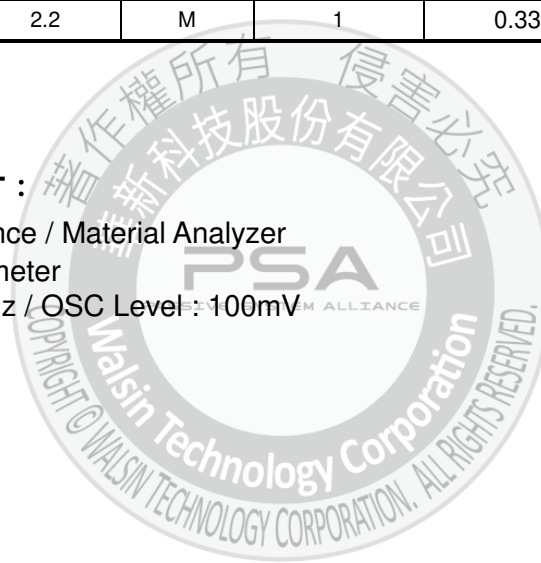
Walsin Part Number	L(uH) Inductance	Tolerance	Measuring Frequency (MHz)	DCR ±25% (Ω)	Rated Current (mA)	SRF (MHz)
WLFM201205MR47PP	0.47	M	1	0.12	1200	100
WLFM201205M1R0PP	1.0	M	1	0.19	800	90
WLFM201205M1R5PP	1.5	M	1	0.26	700	70
WLFM201205M2R2PP	2.2	M	1	0.33	600	40

TEST INSTRUMENT :

●HP4291B-RF Impedance / Material Analyzer

●HP4338A/B Milliohm meter

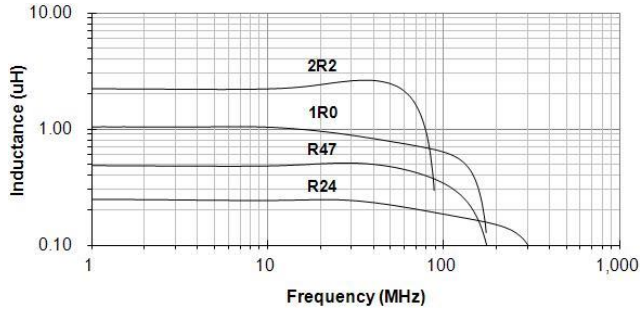
Test Frequency : 1MHz / OSC Level : 100mV



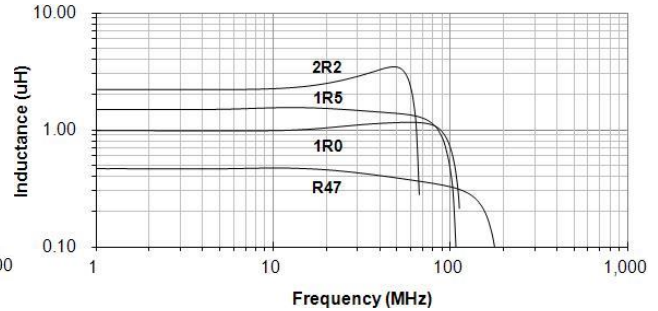
Current Characteristic

Inductance@ Frequency

160808 Series

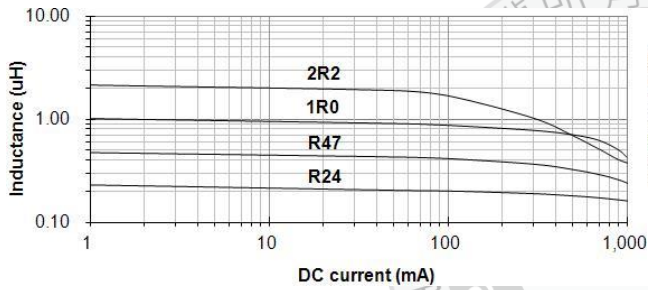


201205 Series

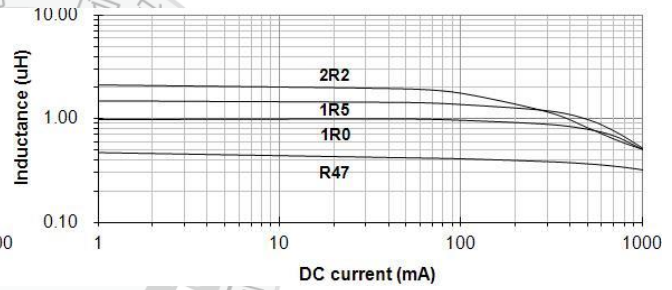


Inductance vs DC-bias

160808 Series

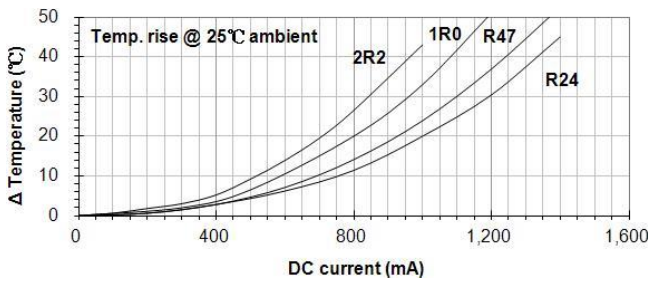


201205 Series

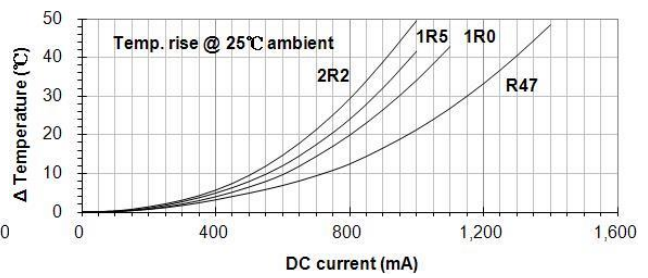


Temperature vs DC-bias

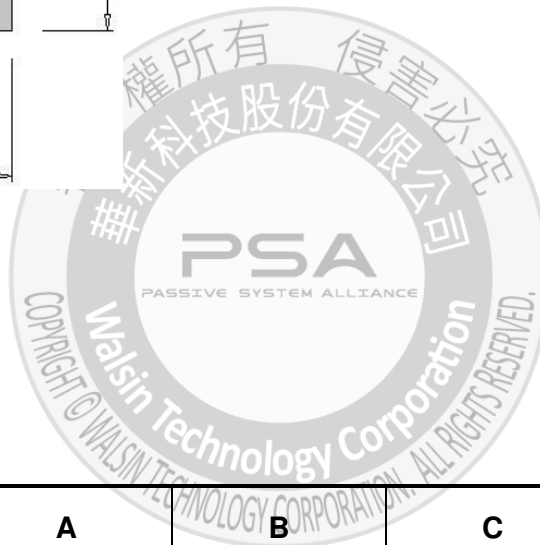
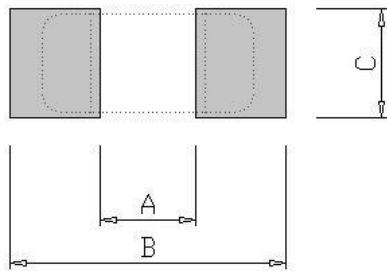
160808 Series



201205 Series



Land Patterns for Reflow Soldering



Size (mm)	A	B	C
1608	0.5 ~ 0.7	1.8 ~ 2.0	0.65 ~ 0.95
2012	1.0 ~ 1.2	3.0 ~ 4.0	1.0 ~ 1.4

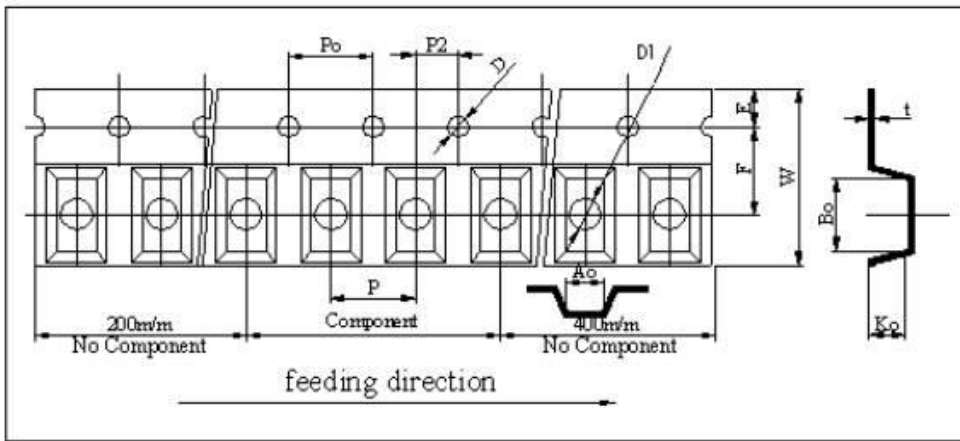
Reliability and Test Conditions

Test item	Test condition	Criteria
Resistance to Solder Heat	<ol style="list-style-type: none"> Solder temperature : $260 \pm 5^{\circ}\text{C}$ Flux : Rosin DIP time : 10 ± 1 sec 	<ol style="list-style-type: none"> More than 95 % of terminal electrode should be covered with new solder No mechanical damage Inductance value should be within ± 20 % of the initial value
Solderability	<ol style="list-style-type: none"> Solder temperature : $235 \pm 5^{\circ}\text{C}$ Flux : Rosin DIP time : 5 ± 1 sec 	<ol style="list-style-type: none"> More than 95 % of terminal electrode should be covered with new solder No mechanical damage
Adhesive Test	<ol style="list-style-type: none"> Reflow temperature : 245°C It shall be soldered on the substrate applying direction parallel to the substrate Apply force(F) : 5 N Test time : 10 sec 	<ol style="list-style-type: none"> No mechanical damage Soldering the products on PCB after the pulling test force > 5 N
Temperature Cycle	<ol style="list-style-type: none"> Temperature: $-40 \sim 125^{\circ}\text{C}$ for 30 minutes each Cycle: 100 cycles Measurement: at ambient temperature 24 hours after test completion 	<ol style="list-style-type: none"> No mechanical damage Inductance should be within $\pm 20\%$ of the initial value (Inductance: $\leq 0.47\mu\text{H}$) Inductance should be within $\pm 30\%$ of the initial value (Inductance: $> 0.47\mu\text{H}$)
High Temperature Resistance	<ol style="list-style-type: none"> Temperature: $85 \pm 5^{\circ}\text{C}$ Testing time: 1000 hours Measurement: at ambient temperature 24 hours after test completion 	<ol style="list-style-type: none"> No mechanical damage Inductance should be within $\pm 20\%$ of the initial value (Inductance: $\leq 0.47\mu\text{H}$) Inductance should be within $\pm 30\%$ of the initial value (Inductance: $> 0.47\mu\text{H}$)
Humidity	<ol style="list-style-type: none"> Temperature: $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ Humidity: 90-95 % RH Testing time: 1000 hours Measurement: at ambient temperature 24 hours after test completion 	<ol style="list-style-type: none"> No mechanical damage Inductance should be within $\pm 20\%$ of the initial value
Rated Current	<ol style="list-style-type: none"> At ambient temperature & humidity Testing time: 5 minutes (under full rated current) 	<ol style="list-style-type: none"> Product surface Temp: below room temperature plus 40°C

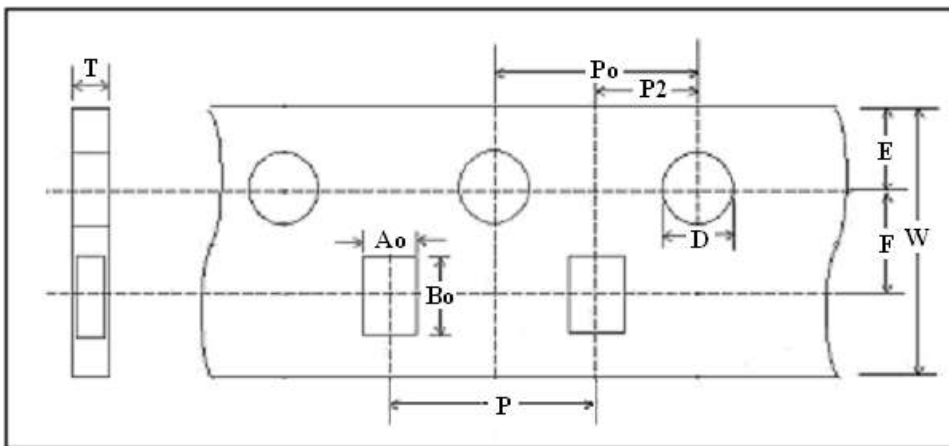
GENERAL TECHNICAL DATA

- Operating temperature range : $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- Storage Condition : Less than 40°C and 70% RH
- Storage time : 12 months Max.
- Soldering method : Reflow

Tape and Reel Specifications Plastic Carries(E)



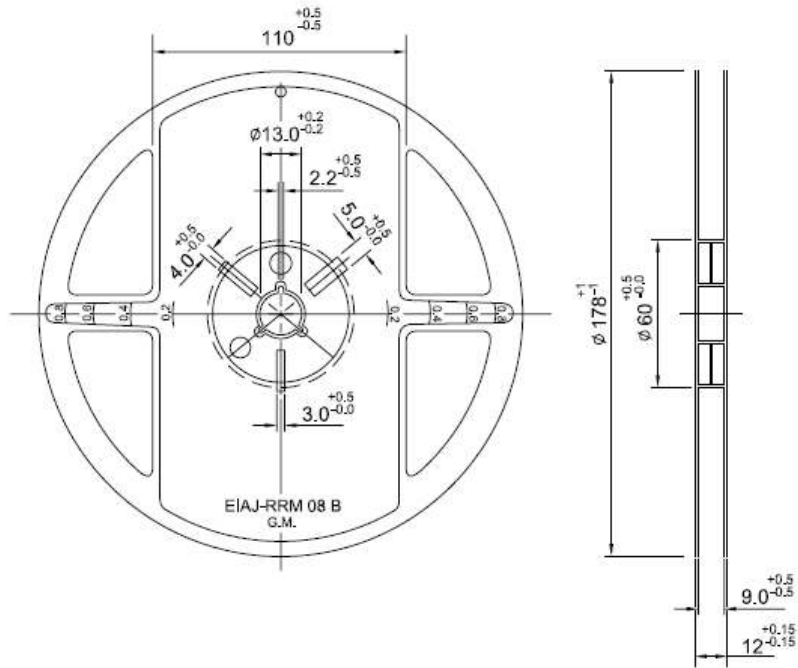
Paper Carrier(P)



Taping Dimensions

(mm)	160808	201205
Symbol	P	P
W	8.00 ± 0.10	8.00 ± 0.10
P	4.00 ± 0.10	4.00 ± 0.10
E	1.75 ± 0.10	1.75 ± 0.05
F	3.50 ± 0.10	3.50 ± 0.05
D	1.56 ± 0.10	1.55 ± 0.05
D1	NA	NA
Po	4.00 ± 0.10	4.00 ± 0.10
10Po	40.0 ± 0.20	40.0 ± 0.10
P2	2.00 ± 0.10	2.00 ± 0.05
Ao	0.97 ± 0.05	1.45 ± 0.05
Bo	1.80 ± 0.05	2.25 ± 0.05
Ko(T)	0.75 ± 0.05	0.60 ± 0.03
t	NA	NA

Reel Dimensions



7" Reel Packaging Quantity		
PART SIZE	160808	201205
Qty.(pcs)	4,000	4,000
BOX	5 reels / inner box	5 reels / inner box

Recommended Soldering Conditions

