

## Multilayer Power Inductor



### ◆ Features

- 1、 High DC bias current due to developed material.
- 2、 Low profile and thin thickness.
- 3、 Monolithic structure for high reliability.
- 4、 Excellent solderability and high heat resistance
- 5、 Low DC resistance.
- 6、 No cross coupling due to magnetic shield



### ◆ Applications

DC-DC converter circuits for mobile phones,  
DSCs, DVCs, HDDs, PDAs, etc.

### ◆ Test Instruments

◎HP4291B

RF IMPEDANCE / MATERIAL ANALYZER

◎HP4338A/B MILLIOHM METER

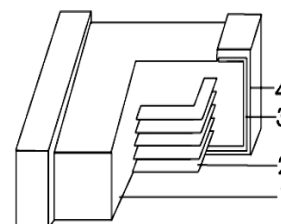
### ◆ Lead Free Part Numbering

**SLM 2520 4R7 M I T**  
(1) (2) (3) (4) (5) (6)

- (1) Series Type
- (2) Dimension: Length x Width
- (3) Inductance: 4R7=4.7μH ;
- (4) Inductance Tolerance : M=±20%;N=±30%
- (5) Company Code
- (6) Packaging : P – Embossed paper tape, 7" reel  
E – Embossed plastic tape, 7" reel  
T – Tape & reel

### ◆ Materials

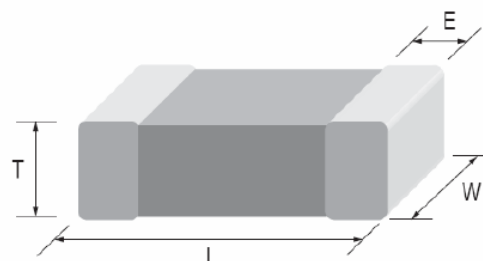
No.	Homogeneous Material Name	Element name composition
1	Ferrite	Ferrite Powder
2	Inner Coils(Ag)	Ag、 Pd
3	Terminal Electrode(Ag)	Ag
4	Electro-Plating (Ni/Sn)	Ni、 Sn



### ◆ Dimensions

Unit: mm [inch]

Size(EIA)	1608(0603)	2012 (0805)	2016 (0806)	2520 (1008)
L	1.60±0.150	2.00±0.20	2.00±0.20	2.50±0.20
W	0.80±0.150	1.25±0.20	1.60±0.20	2.00±0.20
T	0.80±0.150	0.90±0.10	0.90±0.10	0.90±0.10
E	0.30±0.20	0.50±0.30	0.50±0.30	0.50±0.30



### ◆ Package

Size EIA (EIA)	1608(0603)	2012(0805)	2016(0806)	2520(1008)
Standard Packing Quantity (pcs / reel)	4000	3000	3000	3000

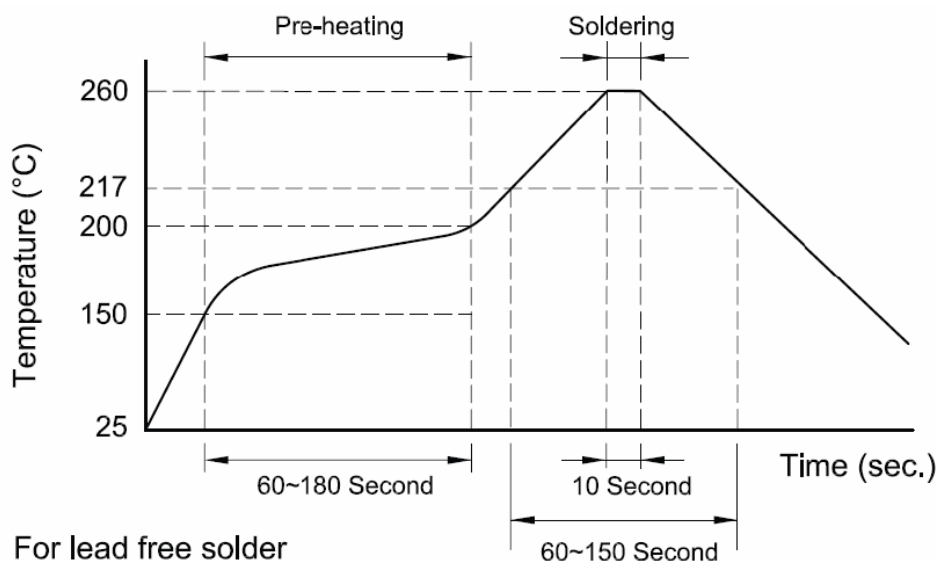
## ◆ Specification

Part Number	Inductance ( $\mu$ H)	Test Freq (MHz)	S.R.F (MHz) Min.	DCR $\pm$ 25% ( $\Omega$ )	Rated current (mA)
<b>SLM1608(EIA 0603)</b>					
SLM16081R0MIT	1.0	1	60	0.22	280
SLM16082R2MIT	2.2	1	50	0.30	250
SLM16083R3MIT	3.3	1	40	0.49	230
SLM16084R7MIT	4.7	1	35	0.50	210
SLM1608100MIT	10	1	33	0.55	150
<b>SLM 2012 (EIA 0805)</b>					
SLM2012R47MIT	0.47	1	100	0.09	1400
SLM20121R0MIT	1.0	1	60	0.11	1300
SLM20122R2MIT	2.2	1	50	0.17	1300
SLM20124R7MIT	4.7	1	35	0.22	1100
SLM2012100MIT	10	1	30	0.55	360
<b>SLM 2016 (EIA 0806)</b>					
SLM2016R47MIT	0.47	1	100	0.06	1600
SLM20161R0MIT	1.0	1	70	0.10	1400
SLM20161R5MIT	1.5	1	60	0.11	1200
SLM20161R8MIT	1.8	1	55	0.11	1200
SLM20162R2MIT	2.2	1	50	0.11	1200
SLM20163R3MIT	3.3	1	40	0.12	1200
SLM20164R7MIT	4.7	1	30	0.14	1100
<b>SLM 2520 (EIA 1008)</b>					
SLM2520R47MIT	0.47	1	100	0.040	1800
SLM25201R0MIT	1.0	1	60	0.055	1600
SLM25201R5MIT	1.5	1	60	0.070	1500
SLM25202R2MIT	2.2	1	40	0.080	1200
SLM25203R3MIT	3.3	1	35	0.100	1100
SLM25204R7MIT	4.7	1	30	0.110	1000
SLM2520100MIT	10	1	20	0.210	550

## ◆ General Technical Data

<b>Operating Temperature Range</b>	-55 $^{\circ}$ C ~ +125 $^{\circ}$ C
<b>Storage Temperature (on board)</b>	-40 $^{\circ}$ C ~ +85 $^{\circ}$ C
<b>Storage Condition</b>	Less than 40 $^{\circ}$ C and 70% RH
<b>Soldering Method</b>	Reflow or Wave Soldering

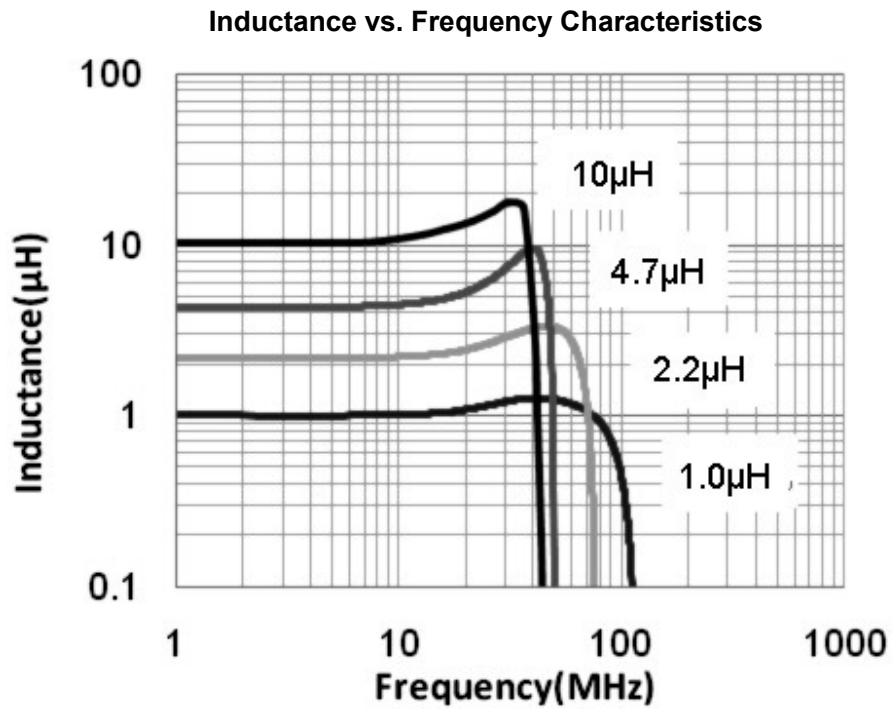
## ◆ Recommended Soldering conditions



## ◆ Reliability And Test Condition

Test item	Test condition	Criteria
<b>Resistance to Solder Heat</b>	1. Solder temperature : $260 \pm 5^{\circ}\text{C}$ 2. Flux : Rosin 3. DIT time : $10 \pm 1$ sec	1. More than 95 % of terminal electrode should be covered with new solder 2. No mechanical damage 3. Inductance value should be within $\pm 20\%$ of the initial value
<b>Adhesive Test</b>	1. Reflow temperature : $245^{\circ}\text{C}$ It shall be Soldered on the substrate applying direction parallel to the substrate 2. Apply force(F) : 5 N 3. Test time : 10 sec	1. No mechanical damage 2. Soldering the products on PCB after the pulling test force $> 5$ N
<b>Steam Aging Test</b>	1. Temperature : $93^{\circ}\text{C}$ 2. Test time : 8 hrs 3. Solder temperature : $235 \pm 5^{\circ}\text{C}$ 4. Flux : Rosin 5. DIT time : $5 \pm 1$ sec	1. More than 95 % of terminal electrode should be covered with new solder
<b>Temperature Cycle</b>	1. Temperature: $-40 \sim 85^{\circ}\text{C}$ For 30 minutes each 2. Cycle: 100 cycles 3. Measurement: At ambient temperature 24 hours after test completion	1. No mechanical damage 2. Inductance should be within $\pm 20\%$ of the initial value
<b>Operational Life</b>	1. Temperature: $85 \pm 5^{\circ}\text{C}$ 2. Testing time: 1000 hrs 3. Applied current: Full rated current 4. Measurement: At ambient temperature 24 hours after test completion	1. No mechanical damage 2. Inductance should be within $\pm 20\%$ of the initial value
<b>Biased Humidity</b>	1. Temperature: $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 2. Humidity: 90-95 % RH 3. Applied current: Full rated current 4. Testing time: 1000 hrs 5. Measurement: At ambient temperature 24 hours after test completion	1. No mechanical damage 2. Inductance should be within $\pm 20\%$ of the initial value
<b>Rated Current</b>	At ambient temperature & humidity Testing time: 5 minutes ( under full rated current )	CMLM product surface temp: below room temperature plus $40^{\circ}\text{C}$

## ◆ Characteristics



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Fixed Inductors](#) category:*

*Click to view products by [Sunltech](#) manufacturer:*

Other Similar products are found below :

[MLZ1608M6R8WTD25](#) [MLZ1608N6R8LT000](#) [MLZ1608N3R3LTD25](#) [MLZ1608N3R3LT000](#) [MLZ1608N150LT000](#)  
[MLZ1608M150WTD25](#) [MLZ1608M3R3WTD25](#) [MLZ1608M3R3WT000](#) [MLZ1608M150WT000](#) [MLZ1608A1R5WT000](#)  
[MLZ1608N1R5LT000](#) [B82432C1333K000](#) [PCMB053T-1R0MS](#) [PCMB053T-1R5MS](#) [PCMB104T-1R5MS](#) [CR32NP-100KC](#) [CR32NP-151KC](#) [CR32NP-180KC](#) [CR32NP-181KC](#) [CR32NP-1R5MC](#) [CR32NP-390KC](#) [CR32NP-3R9MC](#) [CR32NP-680KC](#) [CR32NP-820KC](#)  
[CR32NP-8R2MC](#) [CR43NP-390KC](#) [CR43NP-560KC](#) [CR43NP-680KC](#) [CR54NP-181KC](#) [CR54NP-470LC](#) [CR54NP-820KC](#) [CR54NP-8R5MC](#)  
[MGDQ4-00004-P](#) [MGDU1-00016-P](#) [MHL1ECTTP18NJ](#) [MHL1JCTTD12NJ](#) [PE-51506NL](#) [PE-53601NL](#) [PE-53630NL](#) [PE-53824SNLT](#) [PE-62892NL](#) [PE-92100NL](#) [PG0434.801NLT](#) [PG0936.113NLT](#) [PM06-2N7](#) [PM06-39NJ](#) [HC2LP-R47-R](#) [HC2-R47-R](#) [HC3-2R2-R](#) [HC8-1R2-R](#)