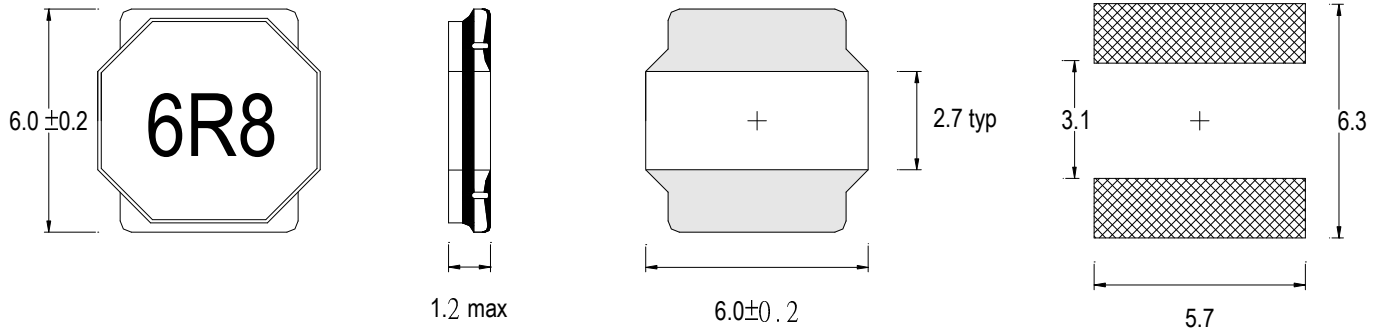


<b>Product Specification</b>		DOC.NO	MR6012-series
Product Description	SMD Power Inductor	Page	1
		Rev.	A0

**Configuration & Dimension:**



**Construction & Material:**

- 1、Core : Ferrite core
- 2、Wire : H Class Enameled copper wire
- 3、Terminal : Ni / Cu / Ag alloy with Sn
- 4、Coating : Magnetic epoxy resin
- 5、Products comply with RoHS' requirements

**Feature:**

- 1、Low profile construction and miniature size
- 2、Magnetic shielded construction .
- 3、High current saturation.
- 4、For new generation portable product D/D converter unit.

**Product Identification:**

<u>MR</u>	<u>6012</u>	<u>  </u>	<u>  </u>
1	2	3	4

- 1、Type
- 2、Dimension
- 3、Inductance:
- 4、Tolerance: (M20% , N30%)

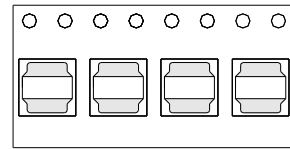
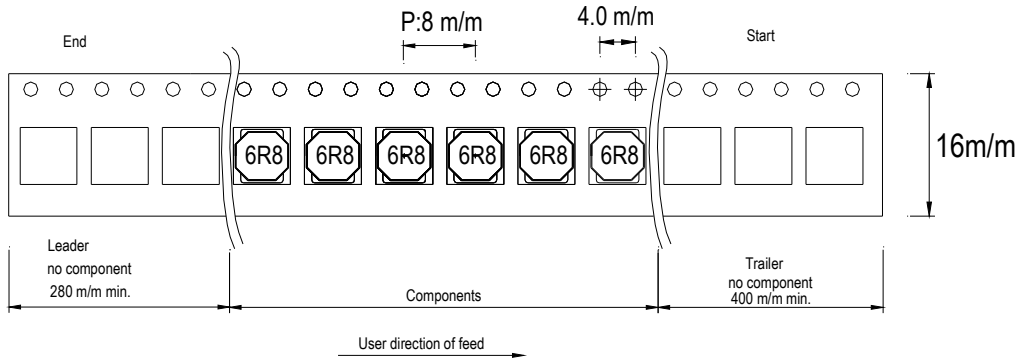
**Application:**

DVC、DSC、PDA、LCD display、Cellular phones, HDD, etc.

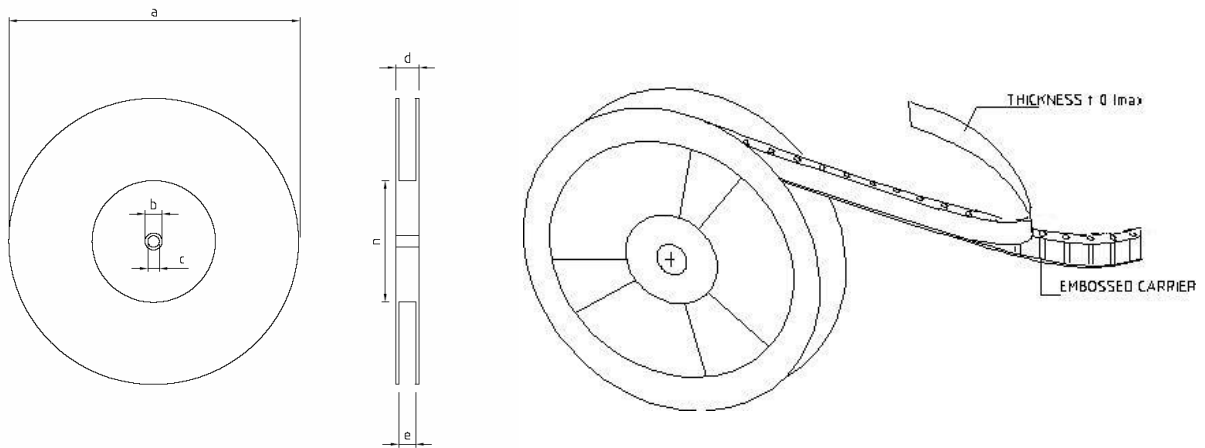
Specification / Electrical				DOC.NO	MR6012-type	
Product Description	SMD Power Inductor			Page	2	
				Rev.	A0	
Part Number	Inductance ( $\mu$ H)	Test Frequency (Hz)	DCR ( $\Omega$ ) $\pm 20\%$	Rated Current (mA)		TOLERANCE
				Saturation Current	Temperature rise current	
MR6012 2R5N	2.5	100K/1V	0.090	2,100	1,730	30 %
MR6012 4R0N	4.0	100K/1V	0.105	1,800	1,570	
MR6012 5R3M	5.3	100K/1V	0.110	1,500	1,400	20 %
MR6012 6R8M	6.8	100K/1V	0.165	1,300	1,180	
MR6012 100M	10	100K/1V	0.235	1,000	1,000	
MR6012 150M	15	100K/1V	0.330	800	790	
MR6012 220M	22	100K/1V	0.530	760	630	
MR6012 330M	33	100K/1V	0.700	590	530	
MR6012 390M	39	100K/1V	0.950	560	490	
MR6012 470M	47	100K/1V	1.050	520	460	

1. Isat : Based on Inductance decrease 30%
2. Irms : Based on Temperature increase 40°C
3. Operating temperature range: -40 to +105°C (Including self-temperature rise)
4. Storage Temp.: -40°C TO +85°C

<b>Packaging</b>		DOC.NO	MR6012-type
Product Description	SMD Power Inductor	Page	3
		Rev.	A0



Bottom View



**STRENGTH OF COVER TAPE: (20g~60g)**

Product Series	P	W	A <sub>0</sub>	B <sub>0</sub>	K <sub>0</sub>	a	b	c	d	e	n
MR6012	8.0 ±0.1	16.0 ±0.2	6.35 ±0.1	6.35 ±0.1	1.40 ±0.1	178.0 ±2.0	21.0 ±0.8	13.0 ±0.8	20.5 Typ	18.0 Max	50 Min

Reel		16Reel / Box		2Box / Carton	
Q'ty(Pcs)	Size m/m	Q'ty(Pcs)	Size m/m	Q'ty(Pcs)	Size m/m
1,000	180 φ	16,000	365×365×90	32,000	380×380×230

<b>Reliability</b>		DOC.NO	MR6012-type	
Product Description	<b>SMD Power Inductor</b>		Page	4
			Rev.	A0

**1. Reliability test :**

NO	Test item	Specification	Test condition	
1-1	Solderability test	The terminals tested should be covered up to 95% by new solder under 10x CCD microscope. Pinholes concentrated on a section are not acceptable	1.soldering temperature is $245\pm 5^{\circ}\text{C}$ $\longleftrightarrow$ 2.Dipping times are totally $5\pm 0.5$ seconds $P_0$	
1-2	High temp. storage test	Electrical characteristics variation shall not change more 3%	Test conditions : $+105^{\circ}\text{C}\pm 2^{\circ}\text{C}$ For 500 hours	
1-3	Low temp. storage test		Test conditions : $-40^{\circ}\text{C}\pm 2^{\circ}\text{C}$ For 500 hours	
1-4	Humidity test		Temperature : $+60^{\circ}\text{C}\pm 2^{\circ}\text{C}$ Humidity : $90\%\pm 5\%$ Time : 500 hours	
1-5	Therma shock test		Test conditions: $+85^{\circ}\text{C}\pm 2^{\circ}\text{C}$ (30min.) $\sim$ $-40^{\circ}\text{C}\pm 2^{\circ}\text{C}$ (30min.) Temp change:2 min. Total : 100 cycles	
1-6	Life test		Test conditions : $+85^{\circ}\text{C}\pm 5^{\circ}\text{C}$ Total test : 500 hours	
1-7	Vibration test t		No damage Appearance can not be broken	Frequency Range : 10~55Hz. Total Amplitude : 1.5mm Sweeping Method :10Hz to 55Hz to 10Hz for 1min Time : For 2 hours on each X,Y,Z
1-8	Soldering heat bear test			Reflow temperature up to above $260^{\circ}\text{C}$

**2. Recommended Lead-Free IR Reflow Conditions :**

