SMD Power Inductor
High Current Molded Type

SIM08-10AE series

MERITEK

FEATURE

- High Saturation Current, Low DCR, High Efficiency
- Low Acoustic Noise and Shielded Construction Design
- High Resolution in EMC Protection
- Application: DC/DC Converters, Smart Phone, PAD, Power Supply

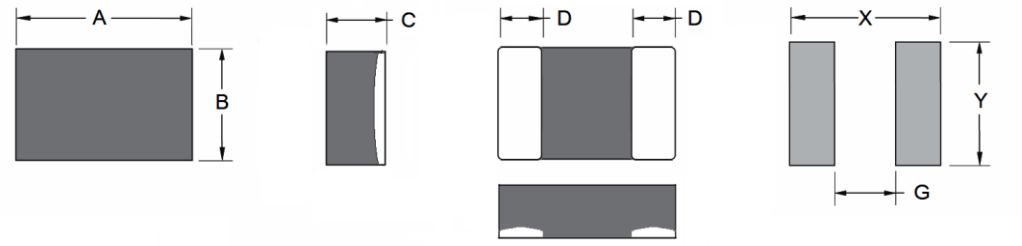
RoHS

ELECTRICAL CHARACTERISTICS

Part Number	Inductance (μH)	Tolerance (%)	Irms (A)		Isat (A)		DCR (mΩ)	
			Typ	Max	Typ	Max	Typ	Max
SIM08R33M10AE	0.33	±20%	6.6	6.0	7.3	7.0	12.0	14.4
SIM08R47M10AE	0.47	±20%	5.8	5.1	6.0	5.4	17.0	20.4
SIM08R82M10AE	0.82	±20%	5.0	4.7	5.2	4.8	26.2	31.4
SIM081R0M10AE	1.00	±20%	4.3	4.0	4.6	3.8	38.0	45.6
SIM081R5M10AE	1.50	±20%	3.3	3.0	3.5	3.2	50.0	60.0
SIM082R2M10AE	2.20	±20%	2.8	2.5	3.0	2.7	85.0	102.0

Notes:
1. Test frequency: Ls:100KHz/1.0V.
2. Heat Rating Current (Irms) will cause the temperature rise approximately ΔT of 40˚C.
3. Saturation Current (Isat) will cause L0 to drop approximately 30%.
4. Operating Temperature: -40 ~ +125ºC (Including self-temperature rise)

DIMENSIONS



(Unit: mm)

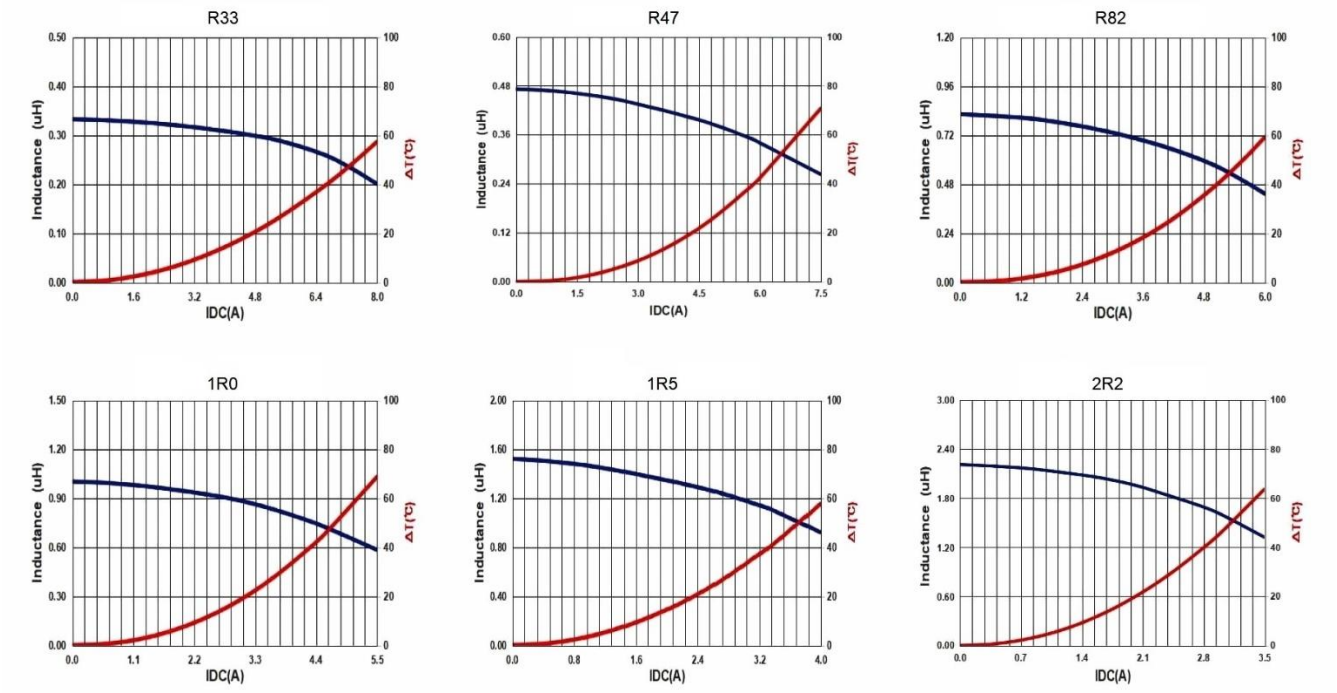
Size Code	A	B	C	D	X	G	Y
1008 (08)	2.5±0.3	2.0±0.3	0.8±0.2	0.9±0.3	2.9 Ref	0.5 Ref	2.3 Ref

PART NUMBERING SYSTEM

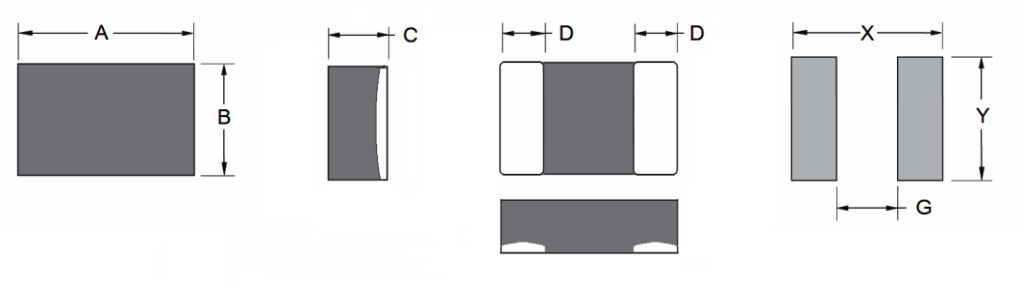
SIM	08	2R2M	10	AE
(1)	(2)	(3)	(4)	(5)

No	Item	Code	Description	
(1)	**Product Code**	SIM	SMD Power Inductor Series, High current Molded type	
(2)	**Size Code**	08	2.5x2.0x0.8mm (W x L)	
(3)	**Inductance**	2R2M	2R2: 2.2μH	R denotes decimal point
(4)	**Thickness**	10	Maximum 1.0mm	08: 0.8mm, 18: 1.8mm
(5)	**Series Code**	AE	High current molded series	

CHARACTERISTIC CURVES – SIM08-10AE SERIES



DIMENSIONS

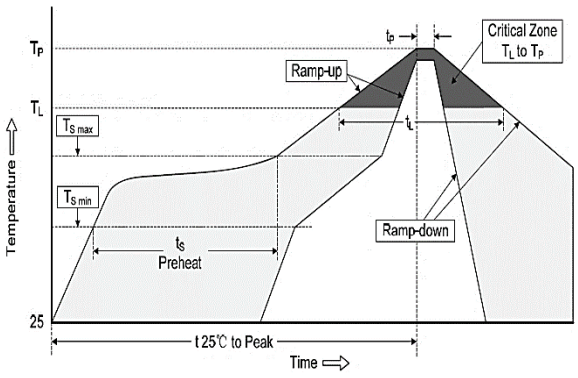


(Unit: mm)

Size Code	A	B	C	D	X	G	Y
0806 (06)	2.0±0.3	1.6±0.3	0.8±0.2	0.7±0.3	2.5 Ref	0.5 Ref	1.9 Ref
1008 (08)	2.5±0.3	2.0±0.3	0.8±0.2	0.9±0.3	2.9 Ref	0.5 Ref	2.3 Ref
1008 (08)	2.5±0.3	2.0±0.3	1.0±0.2	0.9±0.3	2.9 Ref	0.5 Ref	2.3 Ref
1210 (10)	3.2±0.3	2.5±0.3	1.0±0.2	1.1±0.3	3.7 Ref	0.7 Ref	2.8 Ref
1210 (10)	3.2±0.3	2.5±0.3	1.8±0.2	1.1±0.3	3.7 Ref	0.7 Ref	2.8 Ref

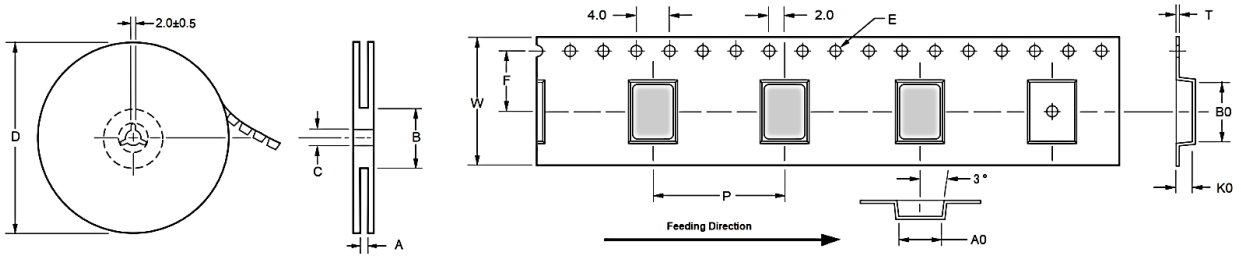
RECOMMENDED SOLDERING PROFILES

Reflow Condition		
Pre Heat	**Temperature Min $T_{s(min)}$**	150°C
	Temperature Max $T_{s(max)}$	200°C
	Time (min. to max.) (t_s)	60 ~120 seconds
Ramp up rate (T_L to T_P)		3°C/second max
$T_{S(max)}$ to T_L (Ramp-up rate)		3°C/second max
Reflow	**Temperature (T_L)**	217°C
	Time (min. to max.) (t_L)	60 ~150 seconds
Peak Temperature (T_P)		See table below
t_p within 5°C of Peak Temperature (T_P)		30 seconds max
Ramp-down Rate		6°C/second max
Time 25°C to Peak Temperature		8 minutes max



Peak Temperature (T_P)			
Volume	**< 350mm³**	**350-2000mm³**	**> 2000mm³**
Thickness < 1.6mm	260°C	260°C	260°C
Thickness 1.6-2.5mm	260°C	250°C	245°C
Thickness ≥ 2.5mm	250°C	245°C	245°C

PACKAGING DIMENSION



(Unit: mm)

Size Code	Reel Dimension				Tape Dimensions								Qty
	A ±1.0	B ±0.5	C ±0.5	D	W ±0.1	F ±0.01	P ±0.1	E ±0.1	A0 ±0.10	B0 ±0.1	K0 ±0.10	T ±0.05	7" Reel
0806	8.4	50	13.0	178.0	8.00	3.5	4.0	1.50	2.00	2.50	1.20	0.23	2000
1008	8.4	50	13.0	178.0	8.00	3.5	4.0	1.50	2.45	2.90	1.35	0.24	2000
1008	8.4	50	13.0	178.0	8.00	3.5	4.0	1.50	2.45	2.90	1.35	0.24	2000
1210	8.4	50	13.0	178.0	8.00	3.5	4.0	1.50	2.90	3.60	1.40	0.22	2000
1210	8.4	50	13.0	178.0	8.00	3.5	4.0	1.50	2.90	3.60	2.20	0.22	2000

*Specifications subject to change without notice.