

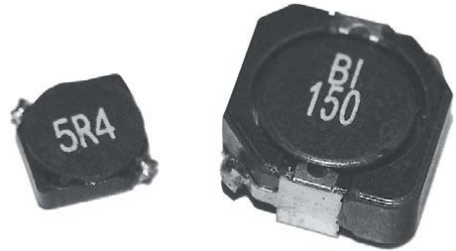
# SMD Power Inductor

## HM66M Series



### Features:

- -40°C to 125°C operation temperature
- 10 amps maximum rated current
- 680  $\mu$ Henry maximum inductance value
- Temperature rise, maximum 40°C
- Operating frequency up to 4MHz
- Magnetically shielded
- Low profile — from Hmax: 3.0mm to 4.1mm depend on the case size



### Description:

The HM66M is a shielded miniature low profile SMD inductors, with ferrite material core. It is characterized by low losses at high frequencies. The HM66M is designed specifically for power supplies and frequency converters that operate with fast switching power semiconductors on a GaN basis. The new power inductance is optimized for a frequency range from 700 kHz to 4 MHz. The HM66M is designed for use in systems with switching frequencies up to 4MHz and operating temperatures up to 125°C. The part can be semi-custom designed to meet up to 155°C in applications where needed.

This series has a wide range of inductances and package sizes. The part is low profile (Hmax: 3.0 to 4.1mm). It is shielded and offers high saturation current with low DC resistance. The HM66M is ideal for high power density applications where the ambient temperature exceeds 85°C. Such applications include high efficiency DC-DC converters using high switching frequencies to 3 MHz as well as EMI and low pass DC filters used in the industrial, medical and telecommunication markets.

### Applications:

- Low profile buck DC-DC converters
- Low profile POL converters
- Output power filter for forward converters
- Power inductance for electronic breakers
- Industrial automation systems
- Industrial DC-DC converters
- Industrial EMI filters

#### General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

### Electrical Specifications

Part Number	Inductance ±20% (µH)	DCR (mΩ MAX)	Figure	Isat (A)	Irms (A)
HM66M-601R2LFTR13	1.2	14	1	3.50	3.50
HM66M-602R2LFTR13	2.2	25	1	3.20	3.00
HM66M-603R3LFTR13	3.3	30	1	3.00	2.50
HM66M-604R7LFTR13	4.7	39	1	2.50	2.20
HM66M-606R8LFTR13	6.8	52	1	2.20	2.00
HM66M-60100LFTR13	10	65	1	1.70	1.70
HM66M-60120LFTR13	12	75	1	1.55	1.50
HM66M-60150LFTR13	15	84	1	1.40	1.20
HM66M-60220LFTR13	22	128	1	1.20	1.00
HM66M-60330LFTR13	33	165	1	1.00	0.80
HM66M-60470LFTR13	47	238	1	0.80	0.70
HM66M-60680LFTR13	68	304	1	0.65	0.60
HM66M-60820LFTR13	82	390	1	0.60	0.50
HM66M-60101LFTR13	100	535	1	0.54	0.40
HM66M-60151LFTR13	150	950	1	0.45	0.35
HM66M-60221LFTR13	220	1500	1	0.37	0.30
HM66M-60331LFTR13	330	1950	1	0.30	0.25
HM66M-60471LFTR13	470	2730	1	0.25	0.20
HM66M-60681LFTR13	680	5150	1	0.20	0.15
HM66M-703R3LFTR13	3.3	20	1	3.50	4.00
HM66M-704R7LFTR13	4.7	24	1	2.90	2.50
HM66M-706R8LFTR13	6.8	29	1	2.40	2.30
HM66M-70100LFTR13	10	38	1	2.00	1.60
HM66M-70150LFTR13	15	57	1	1.60	1.50
HM66M-70180LFTR13	18	92	1	1.50	1.30
HM66M-70220LFTR13	22	96	1	1.30	1.10
HM66M-70330LFTR13	33	124	1	1.10	1.00
HM66M-70470LFTR13	47	155	1	0.95	0.90
HM66M-70680LFTR13	68	234	1	0.75	0.70
HM66M-70101LFTR13	100	358	1	0.65	0.60
HM66M-70151LFTR13	150	580	1	0.54	0.50

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### Electrical Specifications

Part Number	Inductance	DCR	Figure	Isat	Irms
	±20% (uH)	(mΩ MAX)		(A)	(A)
HM66M-70221LFTR13	220	890	1	0.43	0.40
HM66M-70331LFTR13	330	1550	1	0.35	0.30
HM66M-70471LFTR13	470	2200	1	0.32	0.25
HM66M-70681LFTR13	680	3200	1	0.25	0.25
HM66M-841R0LFTR13	1.0 ±30%	7.5	2	10.50	10.00
HM66M-841R5LFTR13	1.5 ±30%	10.5	2	9.50	8.00
HM66M-841R8LFTR13	1.8 ±30%	10.5	2	9.50	8.00
HM66M-842R2LFTR13	2.2 ±30%	10.5	2	7.50	7.50
HM66M-842R5LFTR13	2.5 ±30%	10.5	2	7.50	7.00
HM66M-843R3LFTR13	3.3 ±30%	13	2	6.00	6.00
HM66M-843R8LFTR13	3.8 ±30%	15	2	6.00	5.80
HM66M-844R7LFTR13	4.7	23	2	5.80	5.50
HM66M-845R2LFTR13	5.2	23	2	5.50	5.00
HM66M-846R8LFTR13	6.8	27	2	4.80	4.00
HM66M-847R0LFTR13	7	27	2	4.80	4.00
HM66M-848R2LFTR13	8.2	35	2	4.40	3.80
HM66M-84100LFTR13	10	35	2	4.40	3.80
HM66M-84120LFTR13	12	46	2	4.00	3.60
HM66M-84150LFTR13	15	50	2	3.6	3.5
HM66M-84180LFTR13	18	70	2	3.10	3.00
HM66M-84220LFTR13	22	73	2	2.90	2.50
HM66M-84270LFTR13	27	89	2	2.60	2.50
HM66M-84330LFTR13	33	93	2	2.30	2.20
HM66M-84390LFTR13	39	125	2	2.20	2.00
HM66M-84470LFTR13	47	128	2	2.10	1.80
HM66M-84560LFTR13	56	188	2	1.65	1.50
HM66M-84680LFTR13	68	213	2	1.50	1.40
HM66M-84820LFTR13	82	300	2	1.40	1.30
HM66M-84101LFTR13	100	304	2	1.35	1.20
HM66M-84121LFTR13	120	420	2	1.18	1.00

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Notes:

- 1) Inductance is measured at 100kHz ,0.25V
- 2) DCR is measured at 25°C
- 3) Isat is the saturation current at which inductance rolls off approximately 35% from its initial (zero DC)
- 4) Irms is the approximate current at which  $\Delta T = 40^{\circ} C$

### Outline Dimensions (mm)

Figure 1

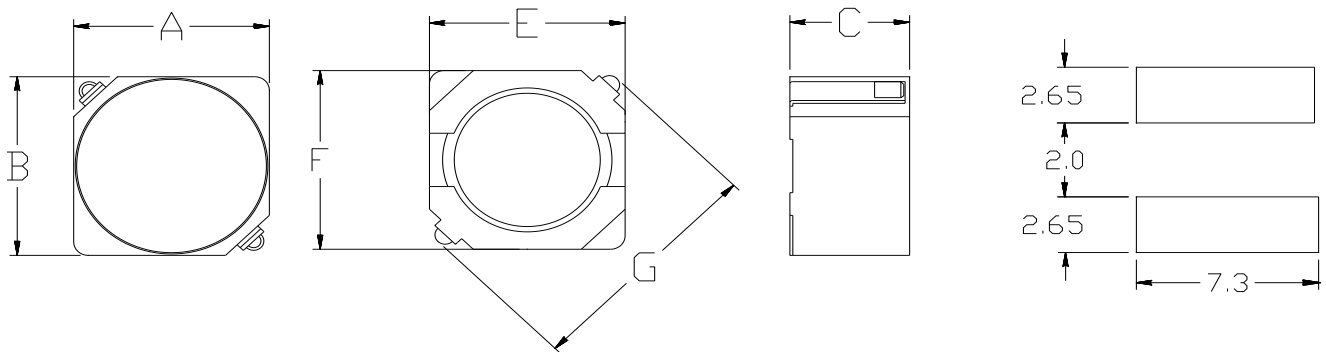
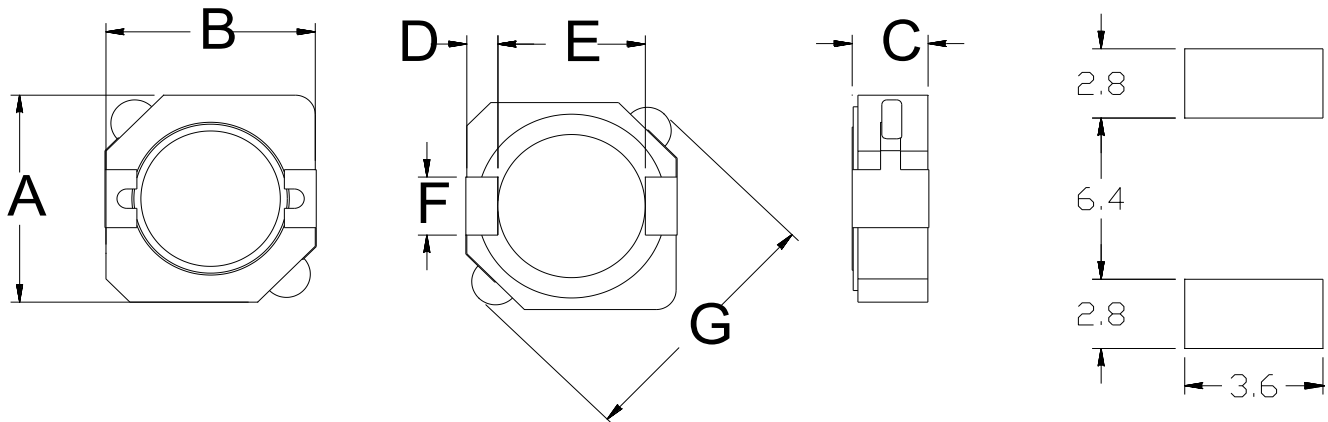


Figure 2



General Note

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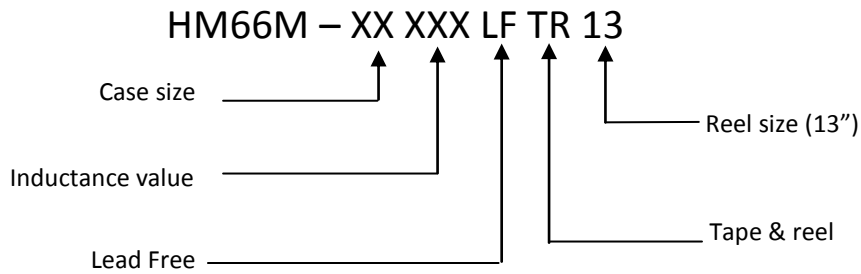
# SMD Power Inductor

## HM66M Series



Case Size	Figure	A	B	C Max.	D Ref.	E Ref.	F Ref.	G Max.
60	1	6.7±0.3	6.7±0.3	3.0	-	6.5	6.5	9.5
70	1	6.7±0.3	6.7±0.3	4.0	-	6.6	6.6	9.5
84	2	10.0±0.3	10.0±0.5	4.1	1.65	7.8	3.0	13.5

### Packaging & Ordering Information



One reel	1000pcs
One shipping carton	6 reels or 6000pcs