

FM362925B Series



1. Features of FM362925B Series :

- 1210 Foot print, 2.5mm height for Power Line application.
- Inductance range from 0.27uH to 1000.0uH.
- Utilizing a miniaturized winding structure.
- Resin-coated surface enables excellent mounting
- RoHS, Halogen Free and Reach Compliant
- Operating Temperature Range -25°C to + 105°C.



2. Applications:

- Personal computers, Hard disk drives
- xDSL modem and Cable modem
- Digital camera and other electronic equipment

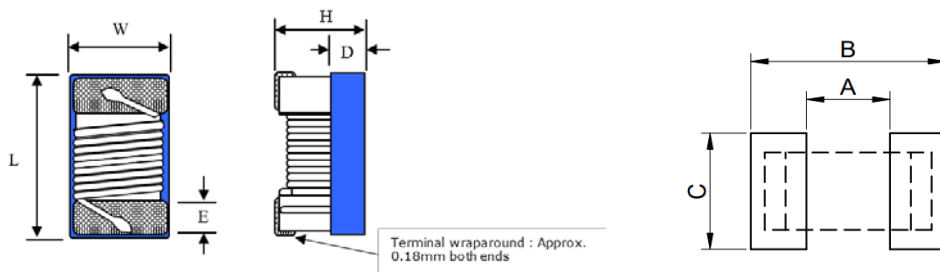
3. Product Identification:

FM 362925 B - R47 J HF

① ② ③ ④ ⑤ ⑥

- ① Product Family Code
- ② Dimension Code (LxWxH)mm
- ③ Design Code
- ④ Inductance
- ⑤ Tolerance Code (G=2%, J=±5%, K=±10%, M=±20%)
- ⑥ Halogen Free

4. Dimensions and Recommended PCB layout:



Size	L	W	H	D	E	A	B	C
181211(0603)	1.80 Max.	1.20 Max.	1.10 Max.	0.45 ref.	0.33 ref.	0.64	1.92	1.02
292520(1008)	2.90 Max.	2.54 Max.	2.03 Max.	1.30 ref.	0.50 ref.	1.27	3.31	2.54
362925(1210)	3.60 Max.	2.90 Max.	2.50 Max.	1.10 ref.	0.50 ref.	2.00	4.40	2.70

NOTE : Unit mm

● New York 1 914 347 2474 ● Taipei 886 2 2698 8669 ● Kaohsiung 886 7 350 2275
 ● Japan 81 568 85 2830 ● Shenzhen 86 755 8418 6263 ● Shanghai 86 21 5424 5141 ● Hong Kong 852 9688 9767
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1. FM362925B Series Electrical Characteristics:

ITG Part Number	Inductance (uH)/MHz	TOL.	Q/MHz Min.	SRF (MHz) Min.	DCR (Ω) Max.	Isat (mA) Max.	Irms (mA) Typ.	Color Coding		
FM362925B-R27□HF	0.27/25	J,K	40/25	500	0.080	3900	3400	Red	Violet	Brown
FM362925B-R33□HF	0.33/25	K	40/25	500	0.090	3400	2600	Orange	Orange	Brown
FM362925B-R39□HF	0.39/25	J,K	40/25	500	0.090	3100	2200	Orange	White	Brown
FM362925B-R47□HF	0.47/25	J,K	40/25	500	0.090	3200	2400	Yellow	Violet	Brown
FM362925B-R56□HF	0.56/25	K	40/25	500	0.100	2900	2300	Green	Blue	Brown
FM362925B-R68□HF	0.68/25	J,K	40/25	450	0.120	2500	2300	Blue	Gray	Brown
FM362925B-R82□HF	0.82/25	J,K	40/25	450	0.105	2400	2300	Gray	Red	Brown
FM362925B-R91□HF	0.91/25	J,K	45/25	410	0.165	2100	1600	White	Brown	Brown
FM362925B-1R0□HF	1.0/7.9	J,K	35/7.9	340	0.125	2400	1750	Brown	Black	Red
FM362925B-1R2□HF	1.2/7.9	K	35/7.9	280	0.135	2400	1650	Brown	Red	Red
FM362925B-1R5□HF	1.5/7.9	K	30/7.9	160	0.145	2100	1750	Brown	Green	Red
FM362925B-1R8□HF	1.8/7.9	J,K	30/7.9	120	0.160	2100	1450	Brown	Gray	Red
FM362925B-2R0□HF	2.0/7.9	J,K	30/7.9	110	0.165	1800	1450	Red	Black	Red
FM362925B-2R2□HF	2.2/7.9	J,K	30/7.9	100	0.170	1800	1450	Red	Red	Red
FM362925B-2R5□HF	2.5/7.9	J,K	30/7.9	80	0.190	1700	1400	Red	Green	Red
FM362925B-2R7□HF	2.7/7.9	J,K	30/7.9	75	0.185	1500	1300	Red	Violet	Red
FM362925B-3R3□HF	3.3/7.9	J,K	30/7.9	70	0.210	1600	1300	Orange	Orange	Red
FM362925B-4R7□HF	4.7/7.9	J,K	28/7.9	55	0.300	1300	1100	Yellow	Violet	Red
FM362925B-5R6□HF	5.6/7.9	J,K	28/7.9	50	0.350	1100	1000	Green	Blue	Red
FM362925B-6R8□HF	6.8/7.9	J,K	28/7.9	45	0.370	1100	1000	Blue	Gray	Red
FM362925B-8R2□HF	8.2/7.9	J,K	28/7.9	45	0.470	940	900	Gray	Red	Red
FM362925B-100□HF	10/2.5	J,K	22/2.5	47	0.500	990	800	Brown	Black	Orange
FM362925B-120□HF	12/2.5	J,K	22/2.5	42	0.680	770	700	Brown	Red	Orange
FM362925B-150□HF	15/2.5	J,K	22/2.5	34	0.720	740	660	Brown	Green	Orange
FM362925B-180□HF	18/2.5	J,K	22/2.5	28	0.950	630	600	Brown	Gray	Orange
FM362925B-220□HF	22/2.5	J,K	22/2.5	25	1.100	640	550	Red	Red	Orange
FM362925B-270□HF	27/2.5	J,K	20/2.5	18	1.250	600	510	Red	Violet	Orange

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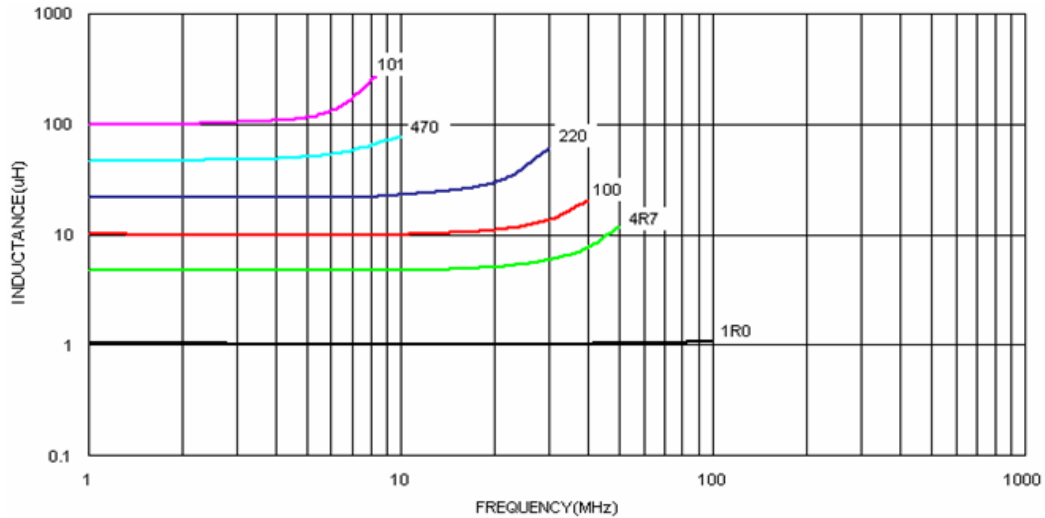
1. FM362925B Series Electrical Characteristics:

ITG Part Number	Inductance (uH)/MHz	TOL.	Q/MHz Min.	SRF (MHz) Min.	DCR (Ω) Max.	Isat (mA) Max.	Irms (mA) Typ.	Color Coding		
FM362925B-330□HF	33/2.5	J,K	20/2.5	13	1.370	490	420	Orange	Orange	Orange
FM362925B-390□HF	39/2.5	J,K	20/2.5	13	1.850	400	400	Orange	White	Orange
FM362925B-470□HF	47/2.5	J,K	20/2.5	12	1.880	470	410	Yellow	Violet	Orange
FM362925B-560□HF	56/2.5	J,K	22/2.5	10	2.750	360	340	Green	Blue	Orange
FM362925B-680□HF	68/2.5	J,K	22/2.5	10	3.000	380	330	Blue	Gray	Orange
FM362925B-820□HF	82/2.5	J,K	22/2.5	10	4.100	300	280	Gray	Red	Orange
FM362925B-101□HF	100/1.0	J,K	15/1.0	8	4.682	310	260	Brown	Black	Yellow
FM362925B-121□HF	120/1.0	J,K	15/1.0	7	5.800	220	240	Brown	Red	Yellow
FM362925B-151□HF	150/1.0	J,K	13/1.0	7	6.102	260	230	Brown	Green	Yellow
FM362925B-181□HF	180/1.0	J,K	13/1.0	3	7.100	250	210	Brown	Gray	Yellow
FM362925B-221□HF	220/1.0	J,K	13/1.0	3	7.650	220	190	Red	Red	Yellow
FM362925B-271□HF	270/1.0	J,K	13/1.0	3	12.520	150	170	Red	Violet	Yellow
FM362925B-331□HF	330/1.0	J,K	13/1.0	3	12.62	170	160	Orange	Orange	Yellow
FM362925B-391□HF	390/1.0	J,K	13/1.0	3	23.00	120	140	Orange	White	Yellow
FM362925B-471□HF	470/1.0	J,K	13/1.0	3	25.00	135	130	Yellow	Violet	Yellow
FM362925B-501□HF	500/1.0	J,K	13/1.0	2	25.90	100	95	Green	Black	Yellow
FM362925B-561□HF	560/1.0	J,K	13/1.0	2	27.00	100	95	Green	Blue	Yellow
FM362925B-681□HF	680/1.0	J,K	13/1.0	2	31.00	100	95	Blue	Gray	Yellow
FM362925B-821□HF	820/1.0	J,K	10/1.0	2	42.00	100	95	Gray	Red	Yellow
FM362925B-102□HF	1000/1.0	J,K	10/1.0	2	46.00	95	95	Brown	Black	Red

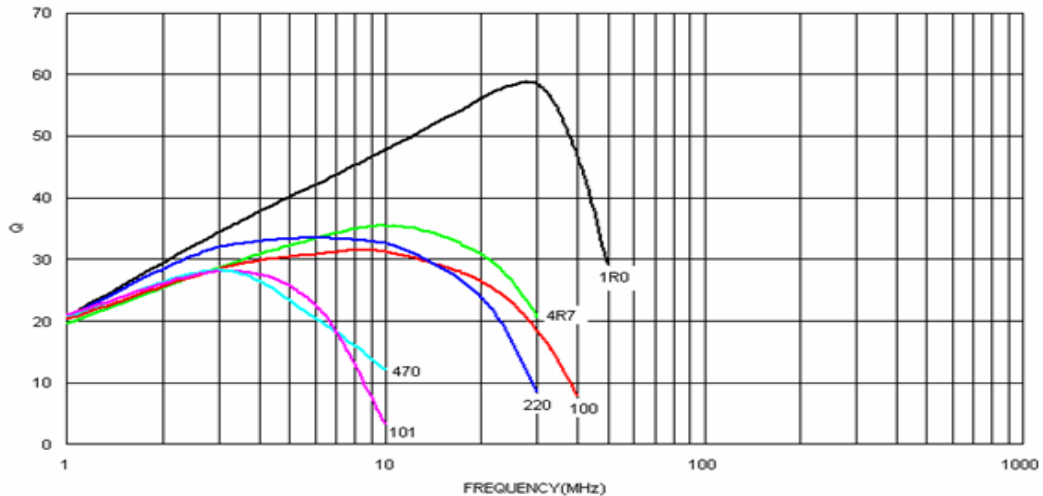
Noted:

1. L , Q , SRF : Agilent/HP E4991A+ Agilent/HP16197A
(The electrical specification test by the smallest gap position) or HP16193A
2. DCR : DIGITAL MILLIOHM METER Chroma 16502, or equivalent.
3. Isat for Inductance drop 35% from its value without current.
4. Irms For 40°C rise form 25°C ambient.
5. Operating temperature range from -25°C to 105°C.

2. FM362925B Series Inductance and Q vs. Frequency characteristics:

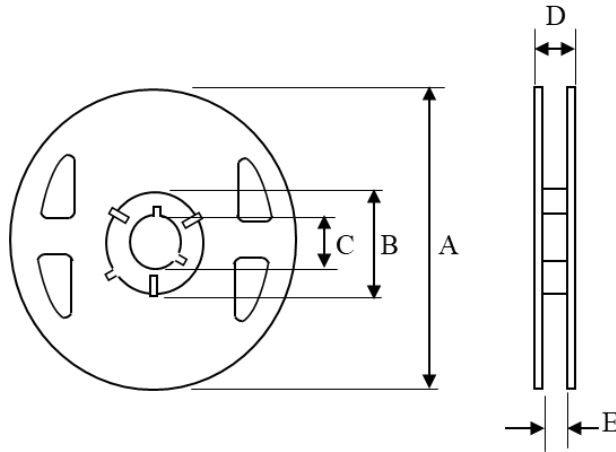


Inductance vs. Frequency



Q vs. Frequency

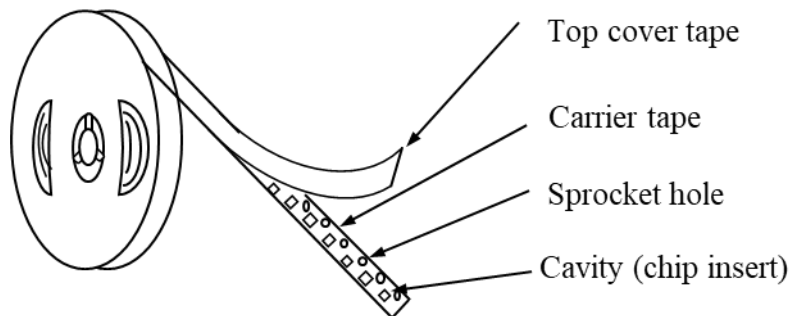
1. Reel and Carrier Tape



Symbol	T reel
A	180
B	60
C	13
D	14.4
E	8.4

NOTE : Unit mm

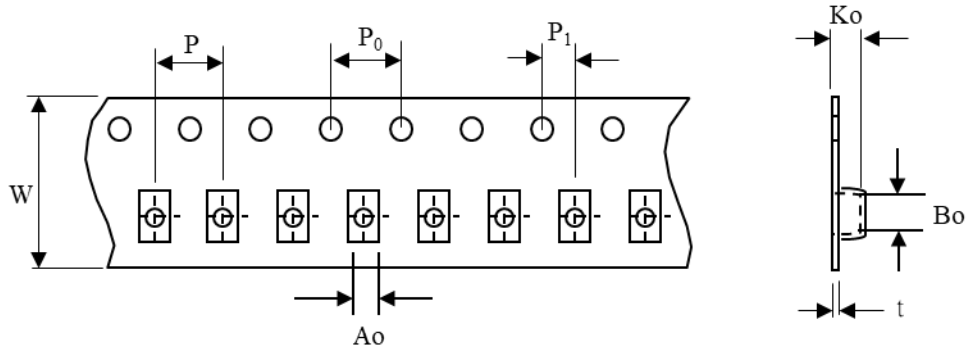
2. Tapping figure



3. Packaging Quantity

Size	T(ø180mm) reel
181211(0603)	4000 pcs /reel
292520(1008)	2000 pcs /reel
352115(1206)	2000 pcs /reel

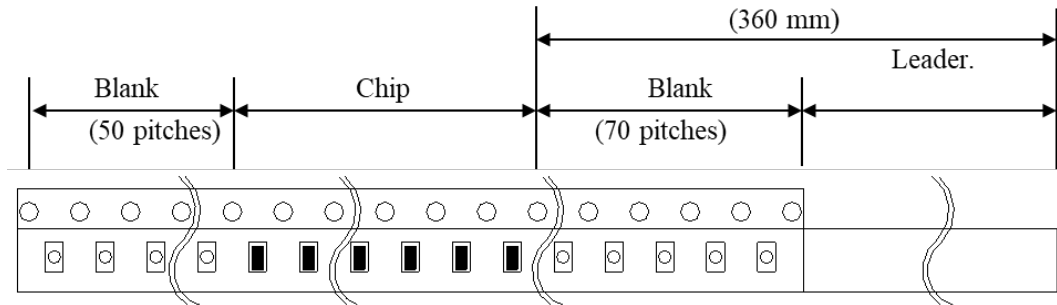
4. Carrier Tape Dimension



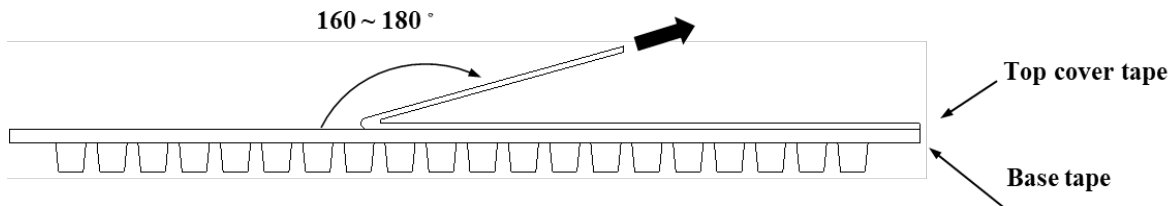
Symbol	W	P	P ₀	P ₁	A ₀	B ₀	K ₀	t
181211(0603)	8.00 ±0.1	4.00 ±0.1	4.00 ±0.1	2.00 ±0.1	1.25 ±0.1	1.90 ±0.1	1.05 ±0.1	0.22 ±0.1
292520(1008)	8.00 ±0.1	4.00 ±0.1	4.00 ±0.1	2.00 ±0.1	2.50 ±0.1	2.85 ±0.1	2.00 ±0.1	0.22 ±0.1
362925(1210)	8.00 ±0.1	4.00 ±0.1	4.00 ±0.1	2.00 ±0.1	2.88 ±0.1	3.72 ±0.1	2.5 ±0.1	0.26 ±0.1

NOTE : Unit mm

5. Packaging Form



6. Cover Tape Peel Strength

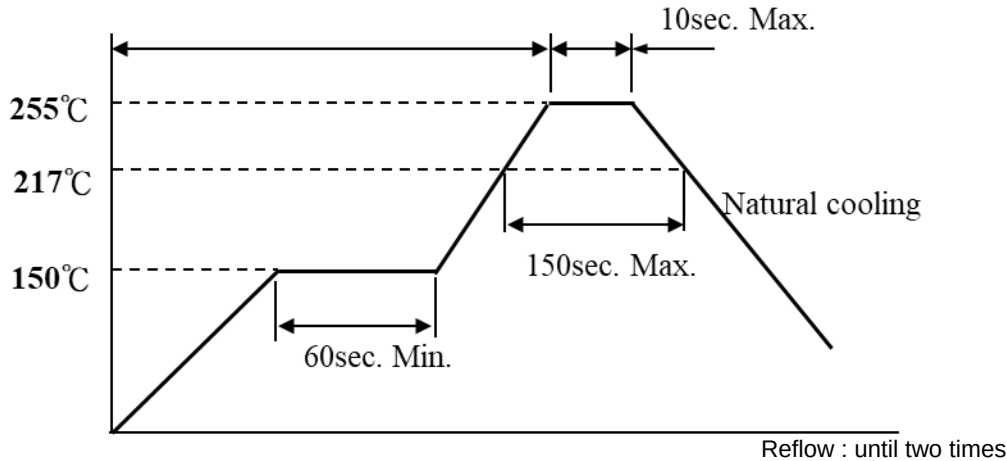


The force for tearing off cover tape is 0.1~0.6(N) in the arrow direction at the following conditions:

1. Temperature : 5 ~ 35°C
2. Humidity : 45 ~ 85%
3. Atmospheric pressure : 860 ~ 1060 hpa

Recommended Soldering Condition

1. Reflow Soldering Conditions



2. Reworking with Soldering Iron

Use a solder iron of less than 30W when soldering, do not allow the soldering iron tip directly touch the Ceramic body outside of terminal electrode. 5 seconds max. at 260°C.

Tip temperature	260°C max
Soldering time	5 seconds max.
Soldering iron output	30w max.

3. Attention in Case of Using

In case of using product, please avoid following matters:

- Splashing water or salt water
- Dew condenses
- Toxic gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)
- Vibrations or shocks which exceed the specified condition
- Please be careful for the stress to this product by board flexure or something after the mounting.

4. Others

- Operating temperature range : To refer series datasheet.
- Storage condition : Temperature 20°~25°C, Relative Humidity 40%~60%
- Recommended wire wound inductors should be used within 6 months from the time of delivery.

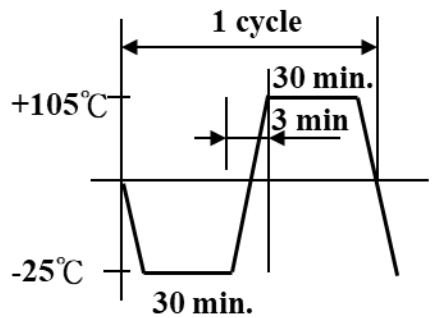
Reliability and Test Condition



Item	Specifications	Test conditions
Solderability	The metalized area must have 90% minimum solder coverage.	Dip pads in flux and dip in solder pot(96.5 Sn/3.5 Ag solder) at 255°C ±5°C.
Resistance to soldering heat	There must be no case deformation or change in dimensions. Inductance must not change more than the stated tolerance.	Inductors shall be reflowed onto a PC board using 96.5 Sn/3.5 Ag solder paste. Solder process shall be at a maximum temperature of 260°C. For 96.5 Sn/3.5 Ag solder paste:>217°C for 90 seconds
Vibration	There must be no case deformation or change in dimensions. Inductance must not change more than the stated tolerance.	Solder specimen inductor on the test printed circuit board. Apply vibrations in each of the x,y and z directions for 2 hours for a total of 6 hours. Frequency : 10~50 Hz Amplitude : 1.5mm
High temperature resistance	There must be no case deformation or change in dimensions. Inductance must not change more than the stated tolerance.	Inductors shall be subjected to temperature 105±2°C for 500±12 hours. Measure the test items after leaving the inductors at room temperature and humidity for 2 hours.
Static Humidity	Inductors must not have a shorted or Open winding.	Inductors shall be subjected to temperature 85±2°C and 90 to 95%RH. for ten 24-hours. Measure the test items after leaving the inductors at room temperature and humidity for 2 hours.

Reliability and Test Condition



Item	Specifications	Test conditions
Component adhesion (push test)	Inductors shall be subjected to 1.8Kg	Inductors shall be reflow soldered ($255^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 10 seconds) to a tinned copper substrate. A force gauge shall be applied to the side of the component. The device must withstand the stated force without a failure of the termination.
Low temperature resistance	There must be no case deformation or change in dimensions. Inductance must not change more than the stated tolerance.	Inductors shall be subjected to temperature $-25 \pm 2^{\circ}\text{C}$ for 500 ± 12 hours. Measure the test items after leaving the inductors at room temperature and humidity for 1 to 2 hours.
Resistance to solvent	There must be no case deformation, change in dimensions, or obliteration of marking.	Inductors must withstand 6 minutes of alcohol or water.
Thermal shock	There must be no case deformation or change in dimensions. Inductance must not change more than the stated tolerance.	Inductors shall be subjected to 10 cycles to the following temperature cycle:  Measure the test items after leaving the inductors at room temperature and humidity for 2 hours.