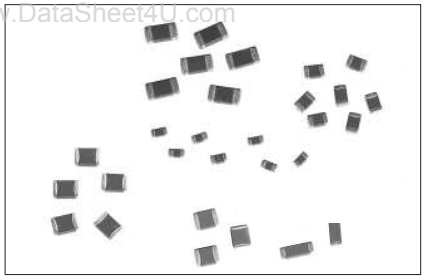


CHIP FERRITE BEADS FBM SERIES

Introductions

The FBM series chip ferrite devices are categorized as noise limiting for EMI/RFI issue and are widely used in communication applications, computers, digital and other information system products. These ferrite devices are typically useful when there is poor or no ground available, or capacitance cannot be tolerated by some high speed data line.

Features

* Operating temperature -40°C to +85°C.
* A closed circuit formed by internal silver printed layer, acting like a magnetic shield, minimizes heat generation and cross-talk.
* Nickel barrier termination makes the part suitable to use at either wave or IR soldering process.
* Easy to use, serial connection to Signal/Power lines for noise limiting purpose.
* 3 types of ferrite material and wide range of Impedance value for flexible needs.

Part Number Code

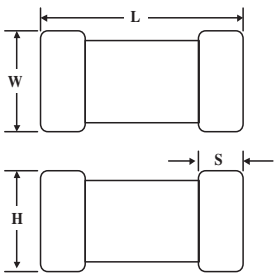
FBM 0805 S T 600 S □□

1	2	3	TAPING	4	5	Internal Code

1 Product Type

2 Chip Dimension

Size (inch) mm	Length (L) (inch) mm	Width (W) (inch) mm	Thickness (T) (inch) mm	Terminal (B) (inch) mm
FBM 0402 100505	(0.040 ± 0.006) 1.00 ± 0.15	(0.020 ± 0.006) 0.50 ± 0.15	(0.020 ± 0.006) 0.50 ± 0.15	(0.010 ± 0.006) 0.25 ± 0.15
FBM 0603 160808	(0.063 ± 0.008) 1.60 ± 0.20	(0.031 ± 0.006) 0.80 ± 0.15	(0.031 ± 0.006) 0.80 ± 0.15	(0.016 ± 0.008) 0.40 ± 0.20
FBM 0805 201209	(0.080 ± 0.008) 2.00 ± 0.20	(0.050 ± 0.008) 1.25 ± 0.20	(0.035 ± 0.008) 0.90 ± 0.20	(0.020 ± 0.012) 0.50 ± 0.30
FBM 1206 321611	(0.126 ± 0.008) 3.20 ± 0.20	(0.063 ± 0.008) 1.60 ± 0.20	(0.043 ± 0.008) 1.10 ± 0.20	(0.020 ± 0.012) 0.50 ± 0.30
FBM 1206 321616	(0.126 ± 0.008) 3.20 ± 0.20	(0.063 ± 0.008) 1.60 ± 0.20	(0.063 ± 0.008) 1.60 ± 0.20	(0.020 ± 0.012) 0.50 ± 0.30
FBM 1210 322513	(0.126 ± 0.008) 3.20 ± 0.20	(0.098 ± 0.008) 2.50 ± 0.20	(0.051 ± 0.008) 1.30 ± 0.20	(0.020 ± 0.012) 0.50 ± 0.30
FBM 1806 451616	(0.177 ± 0.010) 4.50 ± 0.25	(0.063 ± 0.008) 1.60 ± 0.20	(0.063 ± 0.008) 1.60 ± 0.20	(0.020 ± 0.012) 0.50 ± 0.30
FBM 1812 453215	(0.177 ± 0.010) 4.50 ± 0.25	(0.126 ± 0.008) 3.20 ± 0.20	(0.060 ± 0.008) 1.50 ± 0.20	(0.020 ± 0.012) 0.50 ± 0.30



3 Material Type

S : For general application.

P : Identical to SD, but with high current capability.

N : Narrow Band, having sharp impedance characteristics.

4 Inductance Value

060 = 6Ω　　601 = 600Ω

150 = 15Ω　　102 = 1000Ω

5 Tolerance

S = ± 25%

FBM HIGH CURRENT P SERIES

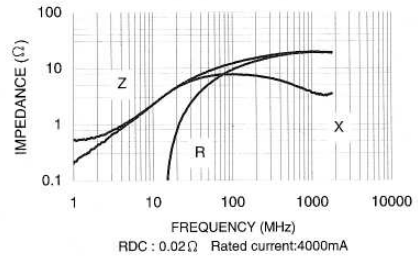
Specification

Part No.	Impedance [1] (Ω)	Percent Tolerance	RDC [2] Max (Ω)	IDC [3] Max (MA)	Thickness (MM)
FBM 0603 PT 110 S □□	11 @ 100 MHZ	S	0.02	4000	0.8
FBM 0603 PT 250 S □□	25 @ 100 MHZ	S	0.03	3000	0.8
FBM 0603 PT 400 S □□	40 @ 100 MHZ	S	0.04	3000	0.8
FBM 0603 PT 600 S □□	60 @ 100 MHZ	S	0.04	3000	0.8
FBM 0603 PT 121 S □□	120 @ 100 MHZ	S	0.05	2500	0.8
FBM 0603 PT 301 S □□	300 @ 100 MHZ	S	0.10	2000	0.8
FBM 0603 PT 501 S □□	500 @ 100 MHZ	S	0.15	1500	0.8
FBM 0603 PT 601 S □□	600 @ 100 MHZ	S	0.20	1000	0.8
FBM 0603 PT 102 S □□	1000 @ 100 MHZ	S	0.30	500	0.8
FBM 0805 PT 110 S □□	11 @ 100 MHZ	S	0.01	6000	0.9
FBM 0805 PT 170 S □□	17 @ 100 MHZ	S	0.02	5000	0.9
FBM 0805 PT 300 S □□	30 @ 100 MHZ	S	0.02	4000	0.9
FBM 0805 PT 500 S □□	50 @ 100 MHZ	S	0.03	3000	0.9
FBM 0805 PT 600 S □□	60 @ 100 MHZ	S	0.03	3000	0.9
FBM 0805 PT 800 S □□	80 @ 100 MHZ	S	0.04	3000	0.9
FBM 0805 PT 121 S □□	120 @ 100 MHZ	S	0.04	3000	0.9
FBM 0805 PT 201 S □□	200 @ 100 MHZ	S	0.05	2500	0.9
FBM 0805 PT 301 S □□	300 @ 100 MHZ	S	0.08	2000	0.9
FBM 0805 PT 601 S □□	600 @ 100 MHZ	S	0.10	2000	0.9
FBM 0805 PT 102 S □□	1000 @ 100 MHZ	S	0.12	1500	0.9
FBM 1206 PT 190 S □□	19 @ 100 MHZ	S	0.02	6000	1.1
FBM 1206 PT 320 S □□	32 @ 100 MHZ	S	0.02	4000	1.1
FBM 1206 PT 600 S □□	60 @ 100 MHZ	S	0.02	4000	1.1
FBM 1206 PT 800 S □□	80 @ 100 MHZ	S	0.03	3000	1.1
FBM 1206 PT 101 S □□	100 @ 100 MHZ	S	0.03	2500	1.1
FBM 1206 PT 301 S □□	300 @ 100 MHZ	S	0.06	2000	1.1
FBM 1206 PT 601 S □□	600 @ 100 MHZ	S	0.10	1800	1.1
FBM 1206 PT 102 S □□	1000 @ 50 MHZ	S	0.15	1200	1.1
FBM 1206 PT 122 S □□	1200 @ 50 MHZ	S	0.18	1000	1.1
FBM 1206 PT 152 S □□	1500 @ 50 MHZ	S	0.20	800	1.1
FBM 1210 PT 600 S □□	60 @ 100 MHZ	S	0.03	4000	1.3
FBM 1210 PT 900 S □□	90 @ 100 MHZ	S	0.03	3000	1.3
FBM 1806 PT 500 S □□	50 @ 100 MHZ	S	0.02	6000	1.6
FBM 1806 PT 600 S □□	60 @ 100 MHZ	S	0.02	5000	1.6
FBM 1806 PT 800 S □□	80 @ 100 MHZ	S	0.03	4000	1.6
FBM 1806 PT 151 S □□	150 @ 100 MHZ	S	0.10	2000	1.6
FBM 1812 PT 700 S □□	70 @ 100 MHZ	S	0.03	6000	1.5
FBM 1812 PT 121 S □□	120 @ 100 MHZ	S	0.03	4000	1.5

1. Impedance is measured in HP-4286A LCR meter with HP-16192 fixture.
2. RDC is measured in HP-4338B millohmeter.
3. For 15°C Rise.

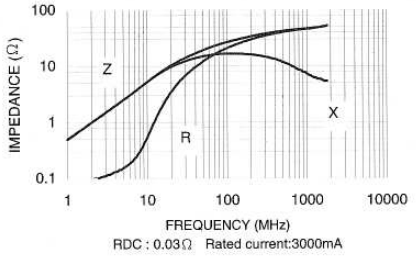
FBM 0603 / 0805 PT SERIES

FBM 0603 PT 110S



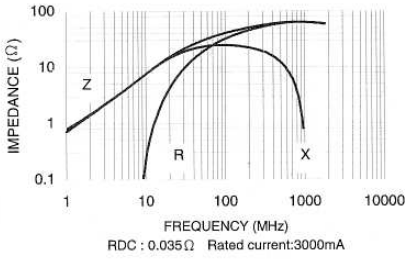
RDC : 0.02Ω Rated current:4000mA

FBM 0603 PT 250S



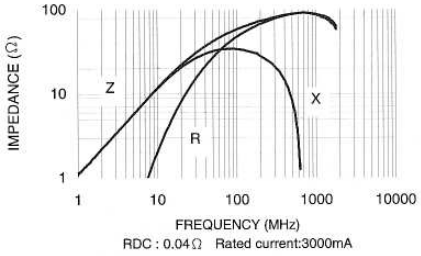
RDC : 0.03Ω Rated current:3000mA

FBM 0603 PT 400S



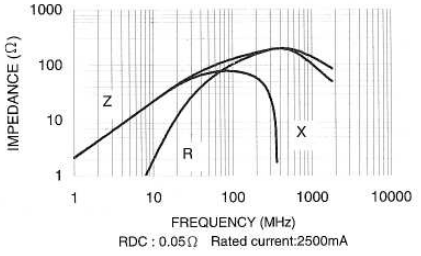
RDC : 0.035Ω Rated current:3000mA

FBM 0603 PT 600S



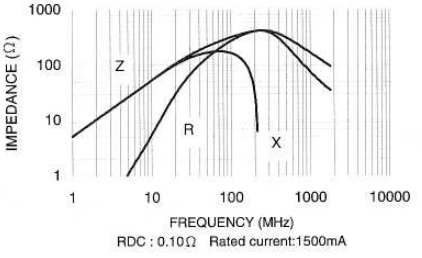
RDC : 0.04Ω Rated current:3000mA

FBM 0603 PT 121S



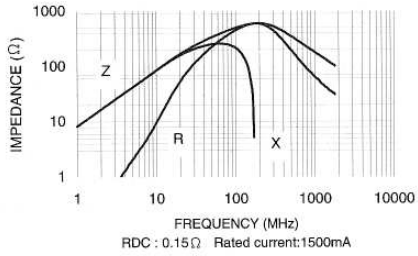
RDC : 0.05Ω Rated current:2500mA

FBM 0603 PT 301S



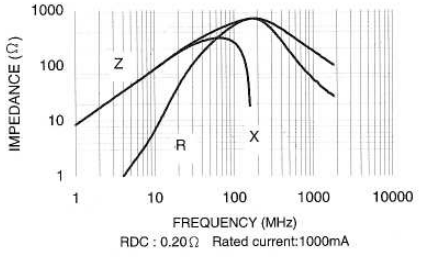
RDC : 0.10Ω Rated current:1500mA

FBM 0603 PT 501S



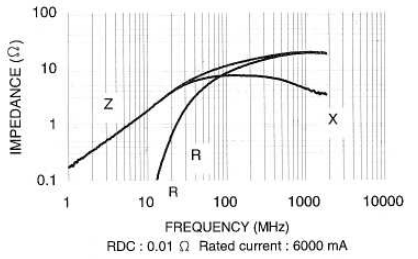
RDC : 0.15Ω Rated current:1500mA

FBM 0603 PT 601S



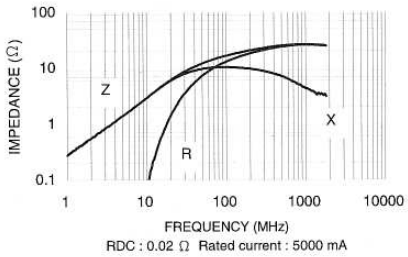
RDC : 0.20Ω Rated current:1000mA

FBM 0805 PT 110S



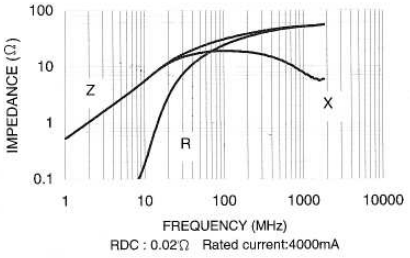
RDC : 0.01 Ω Rated current : 6000 mA

FBM 0805 PT 170S



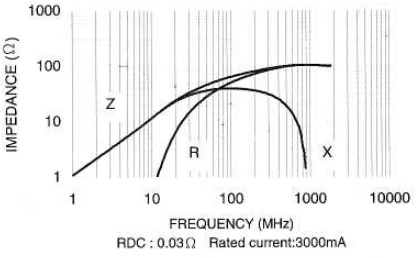
RDC : 0.02 Ω Rated current : 5000 mA

FBM 0805 PT 300S



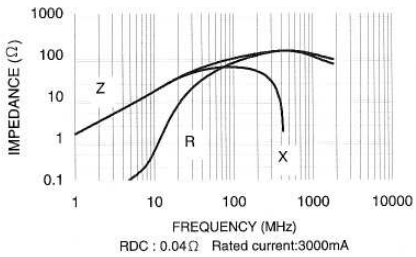
RDC : 0.02Ω Rated current:4000mA

FBM 0805 PT 600S



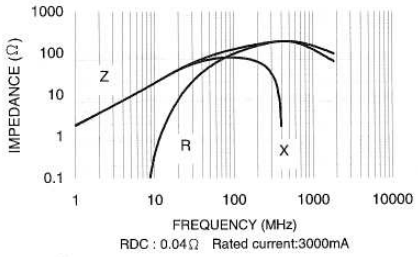
RDC : 0.03Ω Rated current:3000mA

FBM 0805 PT 800S



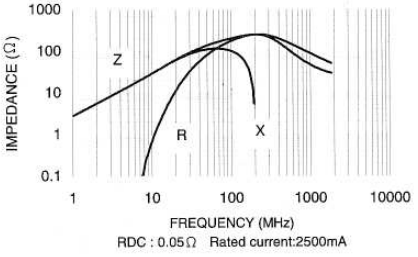
RDC : 0.04Ω Rated current:3000mA

FBM 0805 PT 121S



RDC : 0.04Ω Rated current:3000mA

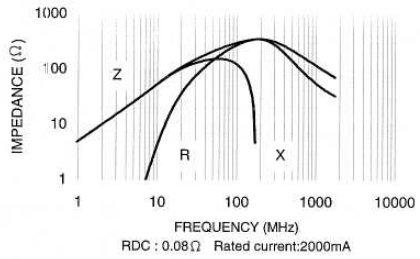
FBM 0805 PT 201S



RDC : 0.05Ω Rated current:2500mA

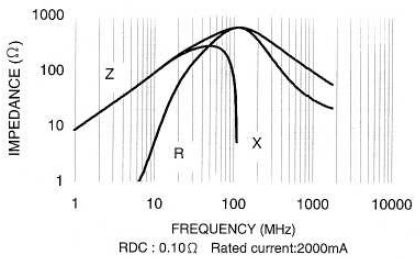
FBM 0805 / 1206 / 1806 / 1812 PT SERIES

FBM 0805 PT 301S



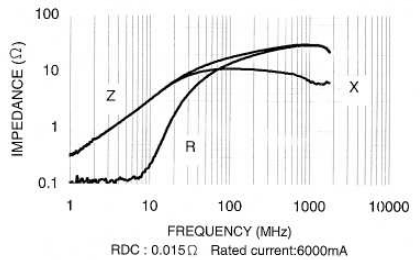
RDC : 0.08Ω Rated current:2000mA

FBM 0805 PT 601S



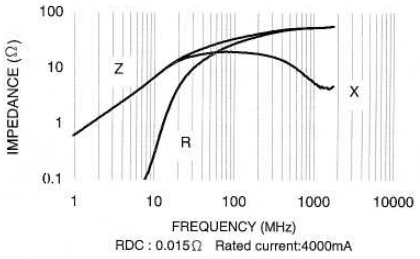
RDC : 0.10Ω Rated current:2000mA

FBM 1206 PT 190S



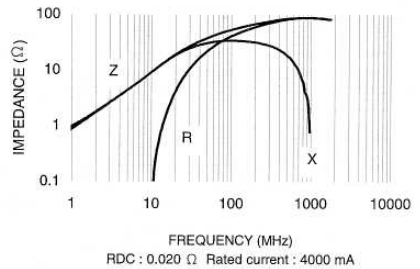
RDC : 0.015Ω Rated current:6000mA

FBM 1206 PT 320S



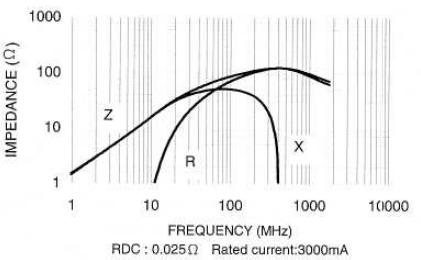
RDC : 0.015Ω Rated current:4000mA

FBM 1206 PT 500S



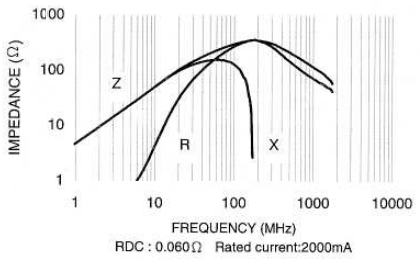
RDC : 0.020 Ω Rated current : 4000 mA

FBM 1206 PT 800S



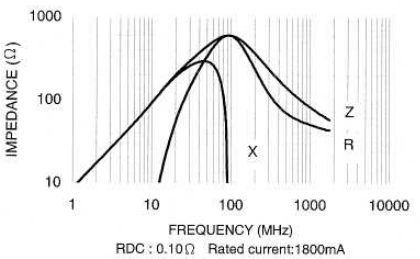
RDC : 0.025Ω Rated current:3000mA

FBM 1206 PT 301S



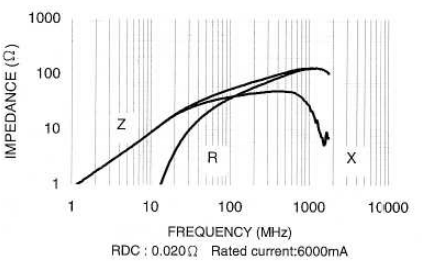
RDC : 0.060Ω Rated current:2000mA

FBM 1206 PT 601S



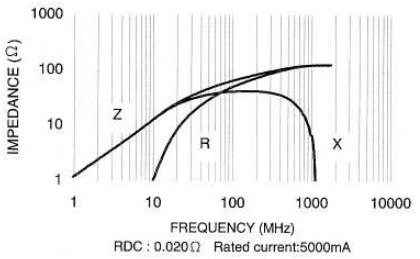
RDC : 0.10Ω Rated current:1800mA

FBM 1806 PT 500S



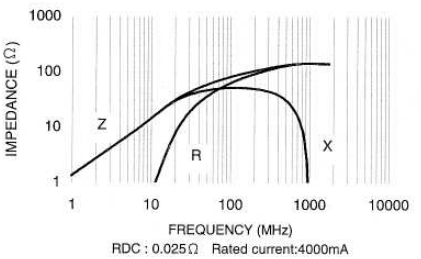
RDC : 0.020Ω Rated current:6000mA

FBM 1806 PT 600S



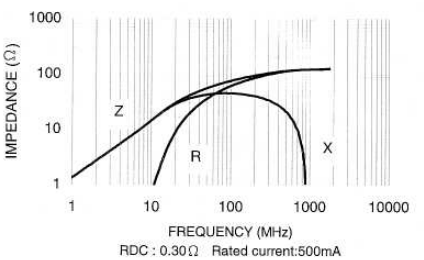
RDC : 0.020Ω Rated current:5000mA

FBM 1806 PT 800S



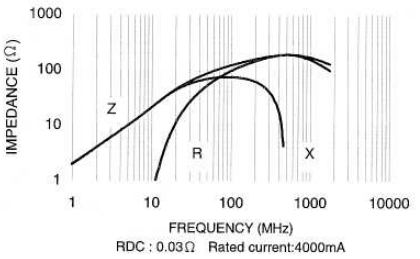
RDC : 0.025Ω Rated current:4000mA

FBM 1812 PT 700S



RDC : 0.30Ω Rated current:500mA

FBM 1812 PT 121S



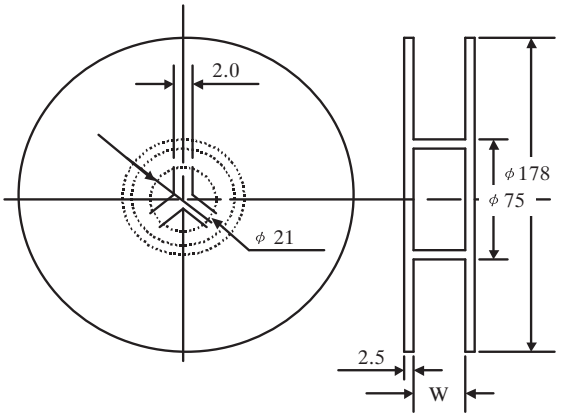
RDC : 0.03Ω Rated current:4000mA

PACKAGING INFORMATION

Packing Quantity

TYPE	Chip Thickness	PCS / REEL
FBM 0402	0.50 mm	10,000
FBM 0603	0.80 mm	4,000
FBM 0805	0.90 mm	4,000
FBM 1206	1.10 mm	3,000
FBM 1206	1.60 mm	2,000
FBM 1210	1.30 mm	2,500
FBM 1806	1.60 mm	2,000
FBM 1812	1.50 mm	1,000

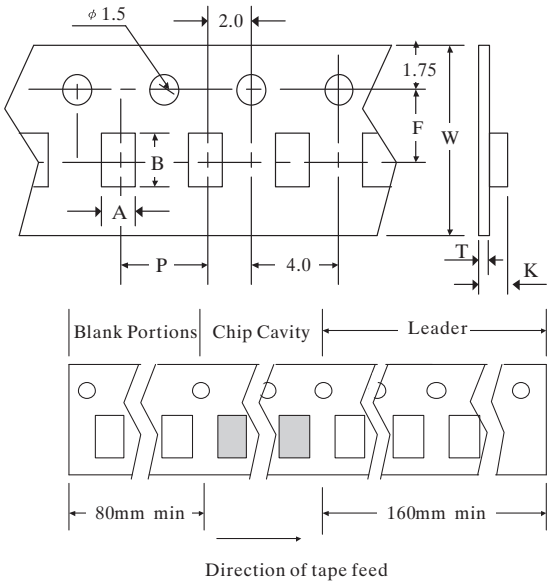
Reel Dimensions



Tape Dimensions (unit:m/m)

TYPE	Chip Cavity		Insert Pitch		Tape Thickness		Tape Width
	A	B	P	F	K	T	W
FBM 0402	0.65	1.15	2.00	3.50	-	0.70	8.00
FBM 0603	1.00	1.80	4.00	3.50	-	1.05	8.00
FBM 0805	1.55	2.30	4.00	3.50	1.15	0.20	8.00
FBM 1206	1.95	3.55	4.00	3.50	1.30	0.20	8.00
FBM 1206	1.95	3.65	4.00	3.50	1.90	0.20	8.00
FBM 1210	2.80	3.40	4.00	3.50	1.65	0.20	8.00
FBM 1806	1.95	4.95	4.00	5.50	1.90	0.30	12.00
FBM 1812	3.65	4.95	8.00	5.50	1.80	0.30	12.00

Tape Dimensions



Pattern Dimensions (unit:m/m)

TYPE	A	B	C
FBM 0402	1.60	0.40	0.50
FBM 0603	2.10	1.00	0.80
FBM 0805	2.60	1.20	0.90
FBM 1206	4.30	2.00	1.60
FBM 1210	4.30	2.00	1.30
FBM 1806	6.00	3.00	1.60
FBM 1812	6.00	3.00	1.50

Recommended Pattern