MLB-M MULTILAYER BEAD ARRAYS

FEATURES

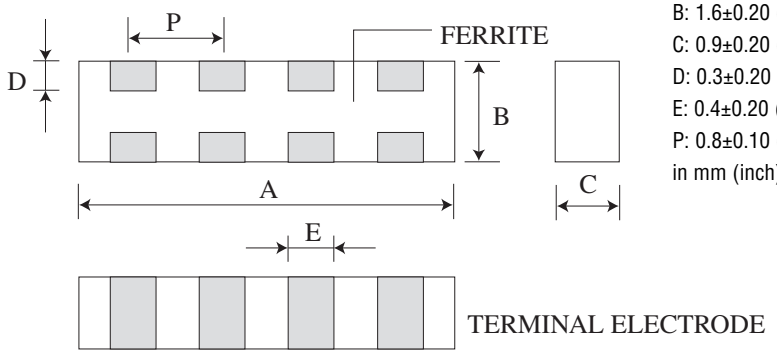
MLB-M series the requirements for high density packaging of electric circuit by incorporating 4 ferrite beads into one package.

It is most suitable for EMI suppression of multiple-lines.

The crosstalk is kept as low as possible with excellent magnetic shield.

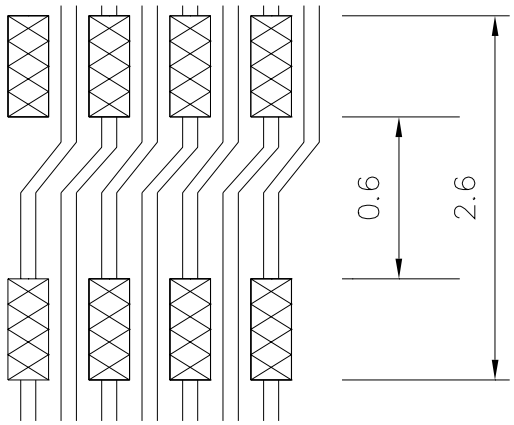
MLB-3216-M4 SERIES

DIMENSION:



A: 3.2±0.20 (0.126±0.008)
B: 1.6±0.20 (0.063±0.008)
C: 0.9±0.20 (0.035±0.008)
D: 0.3±0.20 (0.012±0.008)
E: 0.4±0.20 (0.015±0.008)
P: 0.8±0.10 (0.031±0.004)
in mm (inch)

RECOMMENDED LAND PATTERN DESIGN



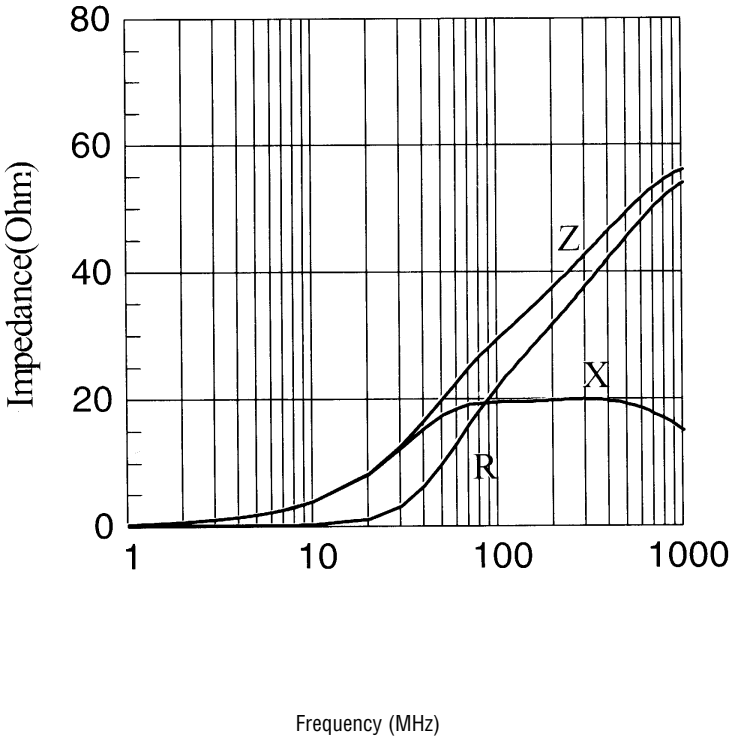
ELECTRICAL CHARACTERISTICS

	Part Number	Impedance (Ω) at 100 MHz	DC Resistance (Ω) Max.	Rated Current (mA) Max.	Operating Temp. Range (°C)
A-TYPE	MLB-3216-0030M4-N2	30 ± 25%	0.4	350	-25 to +85
	MLB-3216-0060M4-N2	60 ± 25%	0.4	250	-25 to +85
	MLB-3216-0120M4-N2	120 ± 25%	0.8	150	-25 to +85
	MLB-3216-0240M4-N2	240 ± 25%	0.8	150	-25 to +85
	MLB-3216-0300M4-N2	300 ± 25%	0.8	150	-25 to +85
	MLB-3216-0470M4-N2	470 ± 25%	1.0	100	-25 to +85
	MLB-3216-0600M4-N2	600 ± 25%	1.5	100	-25 to +85
	MLB-3216-1000M4-N2	1000 ± 25%	1.7	50	-25 to +85
B-TYPE	MLB-3216-0060M4-N3	60 ± 25%	0.8	150	-25 to +85
	MLB-3216-0120M4-N3	120 ± 25%	0.8	150	-25 to +85
	MLB-3216-0220M4-N3	220 ± 25%	0.8	150	-25 to +85
	MLB-3216-0470M4-N3	470 ± 25%	1.0	150	-25 to +85
	MLB-3216-0600M4-N3	650 ± 25%	1.5	100	-25 to +85

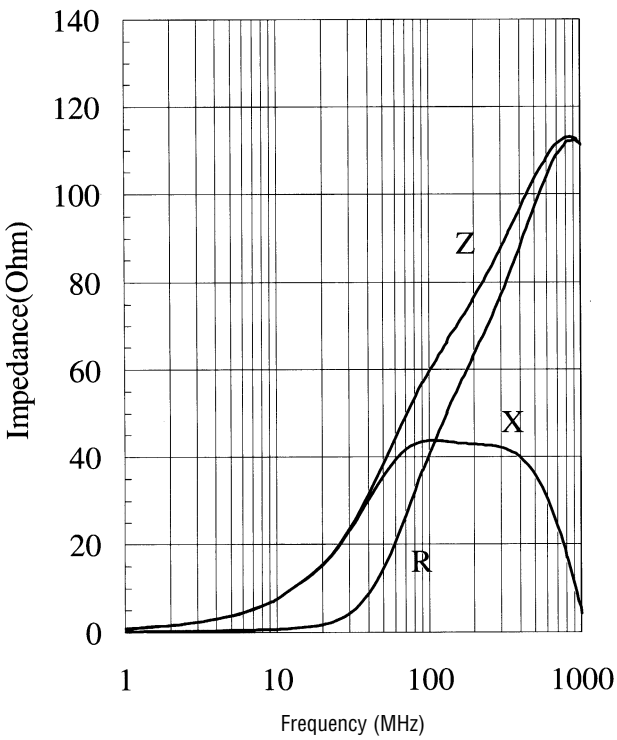
TYPICAL ELECTRICAL CHARACTERISTIC CURVES (A-TYPE)

TEST INSTRUMENT: HP-4291A

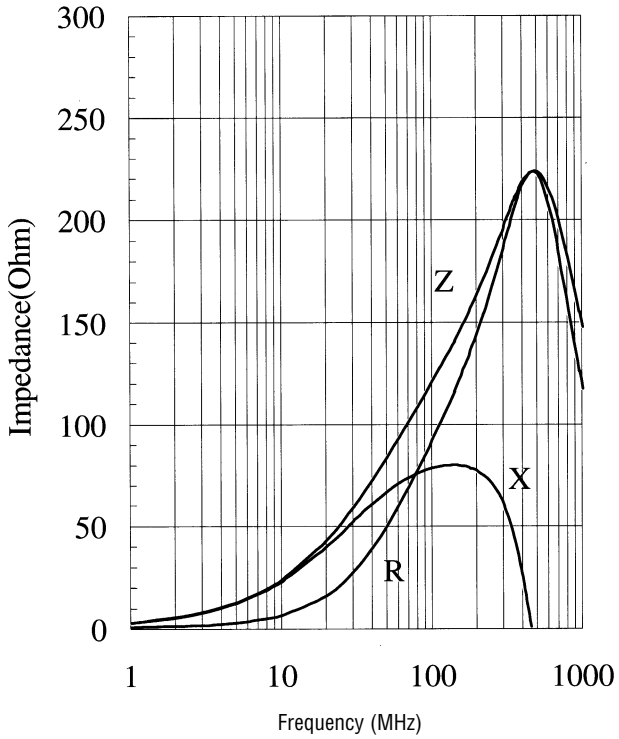
MLB-3216-0030M4-N2



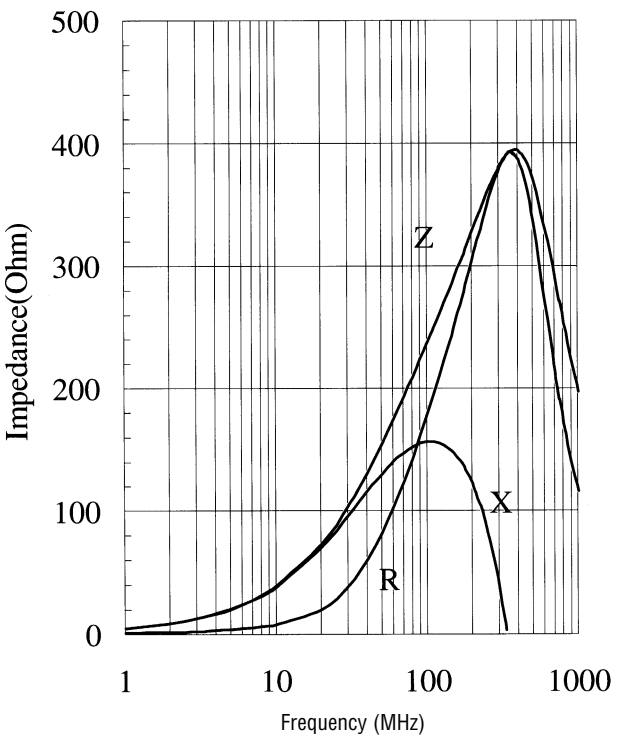
MLB-3216-0060M4-N2



MLB-3216-0120M4-N2



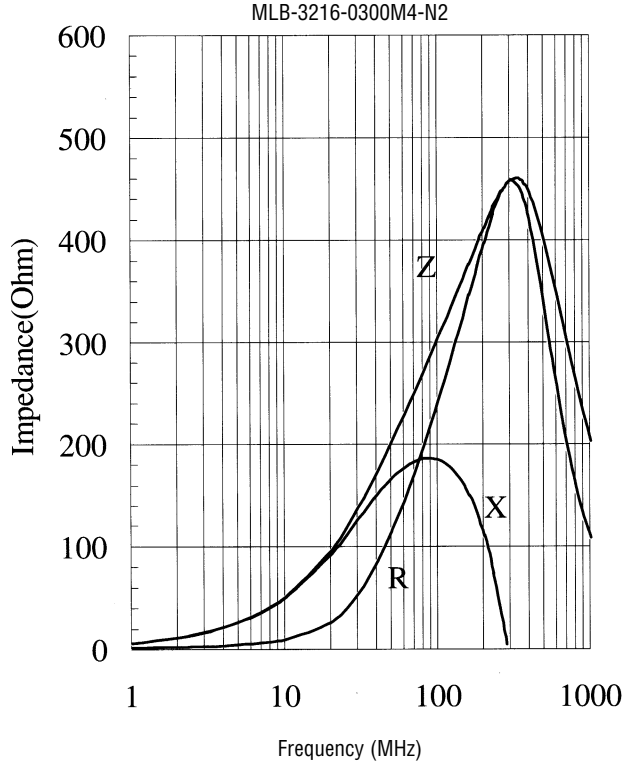
MLB-3216-0240M4-N2



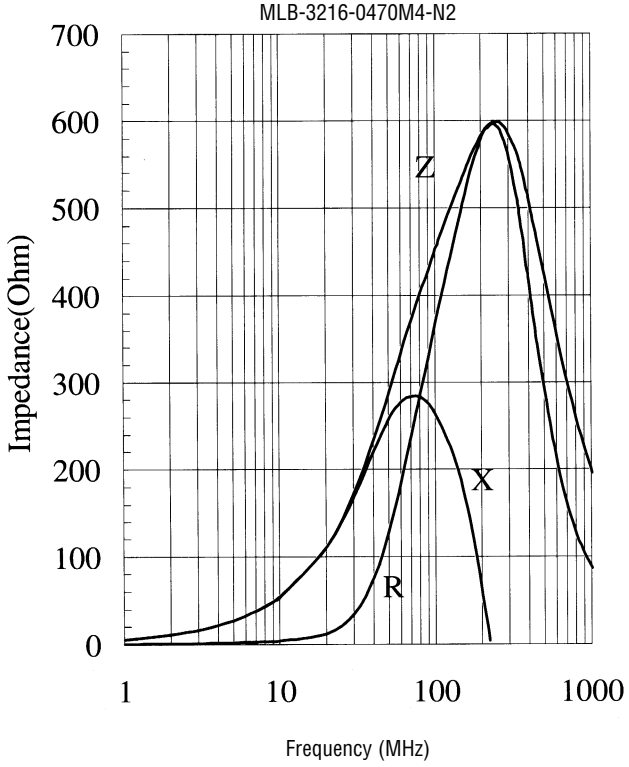
TYPICAL ELECTRICAL CHARACTERISTIC CURVES (A-TYPE)

TEST INSTRUMENT: HP-4291A

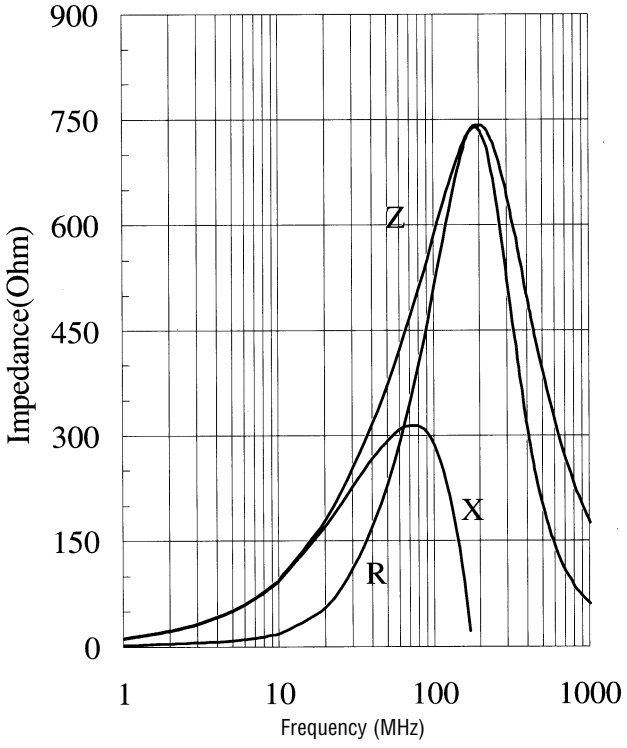
MLB-3216-0300M4-N2



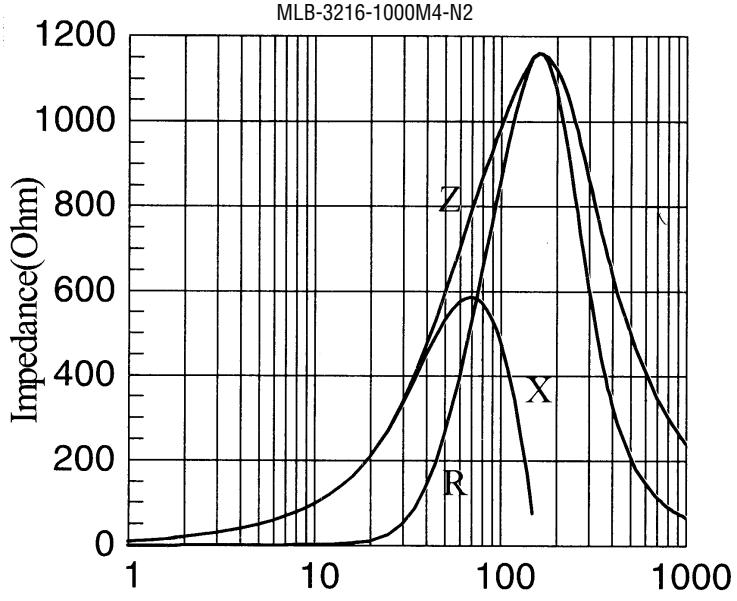
MLB-3216-0470M4-N2



MLB-3216-0600M4-N2



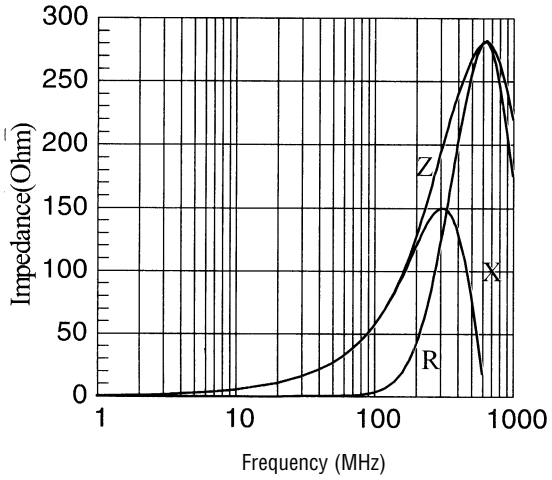
MLB-3216-1000M4-N2



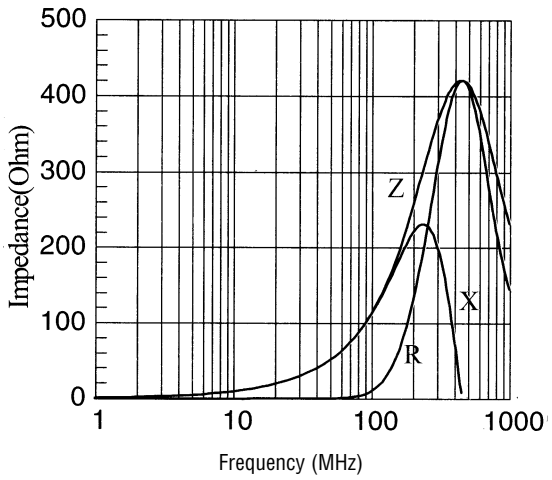
TYPICAL ELECTRICAL CHARACTERISTIC CURVES (B-TYPE)

TEST INSTRUMENT: HP-4291A

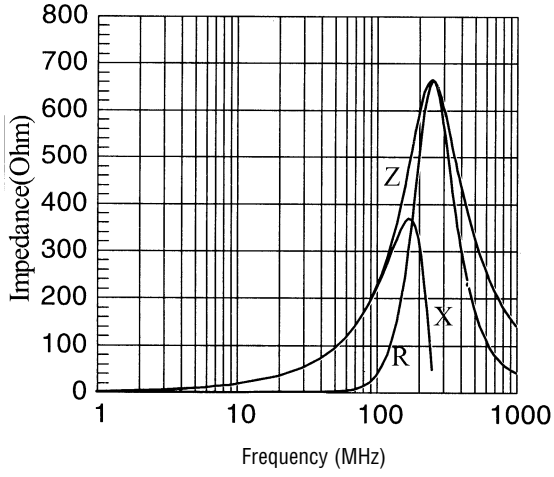
MLB-3216-0060M4-N3



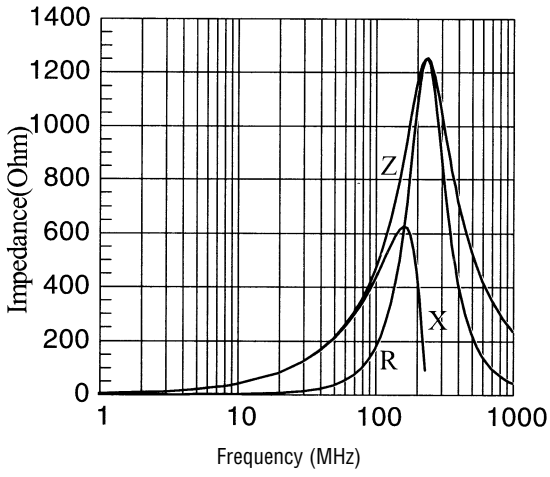
MLB-3216-0120M4-N3



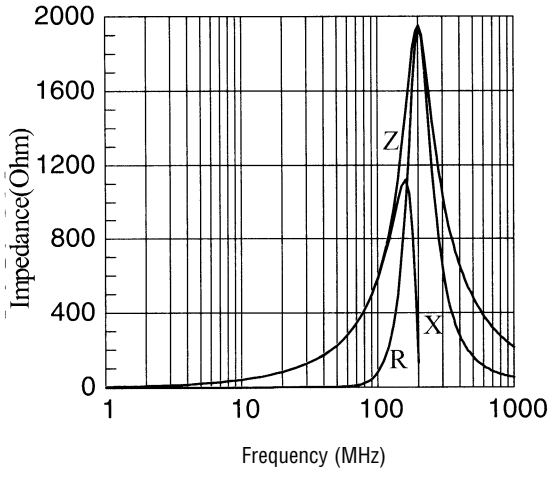
MLB-3216-0220M4-N3



MLB-3216-0470M4-N3

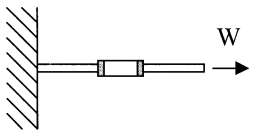
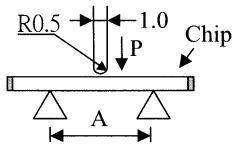


MLB-3216-0600M4-N3



RELIABILITY TESTS

MECHANICAL PERFORMANCE TEST

ITEM	SPECIFICATION	TEST CONDITION		
Solderability	More than 90% of the terminal electrode shall be covered with fresh solder.	Solder: H63A (Eutectic Solder) Solder Temperature: 230±5°C Flux: Rosin		
Soldering Heat Resistance	The chip shall not crack. more then 75% of the terminal electrode shall be covered with solder	Solder: H63A (Eutectic Solder) Solder Temperature: 260±5°C Flux: Rosin		
Terminal Strength	The terminal electrode shall not break off nor the ferrite damage 	**TYPE**	**KGF**	**TIME (SEC)**
		MLB-160808	0.6	30±5
		MLB-201209	0.6	30±5
		MLB-321611	1.0	30±5
		MLB-321616	1.0	30±5
		MLB-322513	1.0	30±5
		MLB-451616	1.0	30±5
		MLB-453215	1.5	30±5
Bending Strength	The Ferrite shall not be damaged by forces applied on the right 	**TYPE**	**A(mm)**	**KGF**
		MLB-160808	1.0	1.0
		MLB-201209	1.4	1.0
		MLB-321611	2.0	2.0
		MLB-321616	2.0	2.0
		MLB-322513	2.0	2.5
		MLB-451616	2.5	2.5
		MLB-453215	2.7	2.5

CLIMATIC TEST

ITEM	SPECIFICATION	TEST CONDITION
Thermal Shock (Temperature Cycle)	Impedance shall be within ±20% of the initial value.	Temperature: -25°C+85°C for 30 minutes each, 50 cycles.
Humidity Resistance	Impedance shall be within ±20% of the initial value.	Temperature: +60°C Humidity: 90% RH Applied Current: Rated Current Time: 1000±12 Hours
High Temperature Resistance	Impedance shall be within ±20% of the initial value.	Temperature: 80°C Applied Current: Rated Current Time: 1000±12 Hours

Operating temperature range -25°C to +85°C. Storage temperature range -40°C to +85°C.