Chip Ferrite Bead
High Current type

SIM-37 Series

MERITEK

FEATURE

- **Operating temperature: -55ºC ~ +125ºC (Including self-temperature rise)**
- **Monolithic Inorganic Material Construction**
- **Low DC Resistance**
- **Noise reduction solution for Signal Line**
- **Excellent Solderability and Heat Resistance**

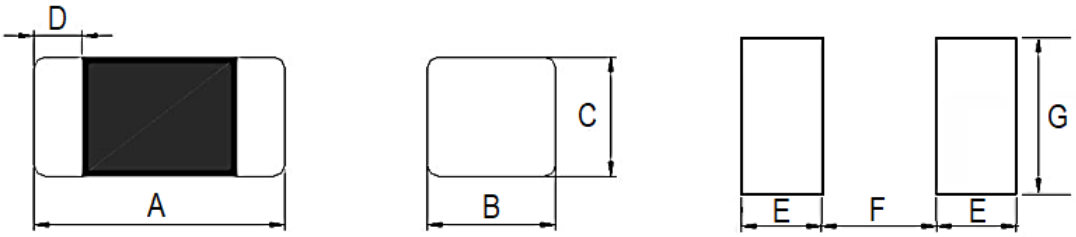
PART NUMBERING SYSTEM

SIM	03	260	Y	6A0	37
(1)	(2)	(3)	(4)	(5)	(6)

RoHS

No	item	Code	Description	
(1)	**Product Code**	SIM	Signal Chip Inductor, Multi-Layer Chip Ferrite Bead Type	
(2)	**Dimension**	03	03: 0603, 1.6x0.8mm	See Dimensions Table
(3)	**Impedance**	260	260: 26Ω	First two digit: Significant, Third: Multiplier
(4)	**Tolerance**	Y	Y: ±25%	-25% ~ +25%
(5)	**Rated Current**	6A0	6A0: 6.0A	A: Decimal
(6)	**Series Code**	37	Chip Ferrite Bead, High Current Type	Internal Control Code

DIMENSIONS



Size Code	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
SIM03 (0603)	1.60±0.15	0.80±0.15	0.80±0.15	0.2~0.6	0.80	0.85	0.95
SIM05 (0805)	2.00±0.20	1.25±0.20	0.85±0.20	0.2~0.8	1.05	1.00	1.45
SIM06 (1206)	3.20±0.20	1.60±0.20	1.10±0.20	0.4~1.0	1.05	2.20	1.80
SIM10 (1210)	3.20±0.20	2.50±0.20	1.30±0.20	0.6~1.0	1.05	2.20	2.70
SIM62(1612)	4.06±0.20	3.05±0.20	2.28±0.20	0.69~1.09	1.05	3.30	3.40
SIM86 (1806)	4.50±0.20	1.60±0.20	1.60±0.20	0.6~1.0	1.05	3.30	1.80
SIM82 (1812)	4.50±0.20	3.20±0.20	See Below	0.6~1.0	1.05	3.30	3.40
SIM20 (2220)	5.59±0.51	5.08±0.25	See Below	0.51~1.01	1.55	3.05	6.10
SIM32 (3312)	8.5±0.2	3.05±0.20	2.28±0.20	0.69~1.09	4.50	6.48	4.06

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ELECTRICAL CHARACTERISTICS

Size	Part Number	Impedance (Ω) ±25%	Test Frequency (MHz)	DCR (Ω) Max	Rated Current (mA) Max	Thickness (mm)
0603	SIM03260Y6A037	26	100	0.007	6000	0.80±0.15
0805	SIM05070Y6A037	7	100	0.008	6000	0.85±0.20
	SIM05110Y6A037	11	100	0.008	6000	0.85±0.20
	SIM05170Y6A037	17	100	0.008	6000	0.85±0.20
	SIM05300Y6A037	30	100	0.008	6000	0.85±0.20
	SIM05390Y6A037	39	100	0.008	6000	0.85±0.20
	SIM05600Y6A037	60	100	0.02	6000	0.85±0.20
	SIM05800Y6A037	80	100	0.02	6000	0.85±0.20
	SIM05121Y6A037	120	100	0.025	6000	0.85±0.20
1206	SIM06310Y6A037	31	100	0.006	6000	1.10±0.20
	SIM06520Y6A037	52	100	0.008	6000	1.10±0.20
	SIM06800Y4A037	80	100	0.02	4000	1.10±0.20
	SIM06121Y5A037	120	100	0.025	5000	1.10±0.20
1210	SIM10520Y6A037	52	100	0.008	6000	1.30±0.20
	SIM10600Y6A037	60	100	0.008	6000	1.30±0.20
1612	SIM62560Y10A37	56	100	0.004	10000	2.28±0.20
1806	SIM86600Y6A037	60	100	0.008	6000	1.60±0.20
1812	SIM82600Y6A037	60	100	0.008	6000	1.50±0.20
	SIM82121Y6A037	120	100	0.02	6000	1.50±0.20
	SIM82151Y6A037	150	100	0.02	6000	1.50±0.20
	SIM82700Y6A037	70	100	0.008	6000	1.50±0.20
	SIM82881Y4A037	880	100	0.025	4000	1.50±0.20
	SIM82101Y8A037	100	100	0.007	8000	2.30±0.25
2220	SIM20171Y4A037	170	100	0.03	4000	1.52±0.25
	SIM20101Y6A037	100	100	0.006	6000	1.80±0.25
	SIM20151Y5A037	150	100	0.015	5000	1.80±0.25
	SIM20181Y5A037	180	100	0.02	5000	1.80±0.25
	SIM20251Y4A037	250	100	0.015	4000	1.80±0.25
	SIM20271Y4A037	270	100	0.035	4000	3.20±0.25
	SIM20401Y4A537	400	100	0.03	4500	3.20±0.25
	SIM20801Y8A037	800	100	0.01	8000	3.60±0.25
3312	SIM32101Y10A37	100	100	0.004	10000	2.28±0.20

CHARICTERISTIC CURVES

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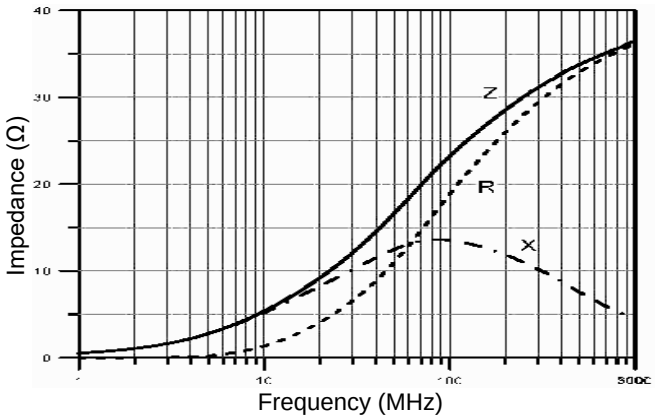

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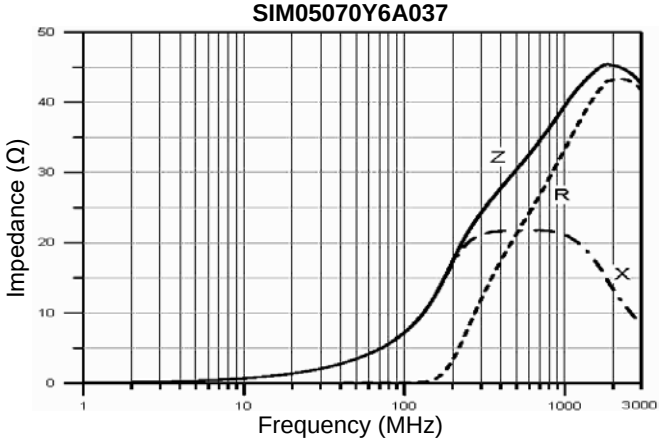

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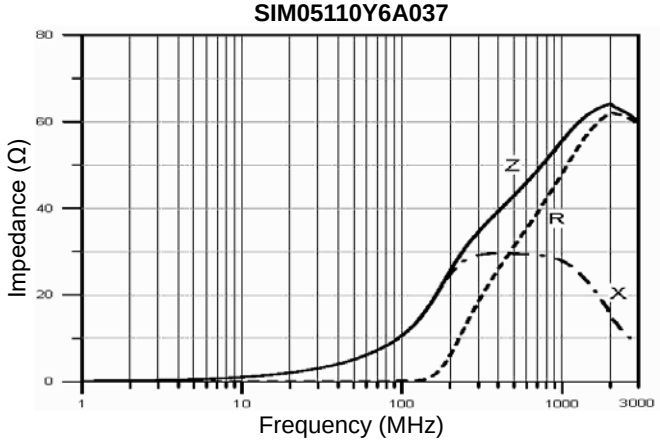

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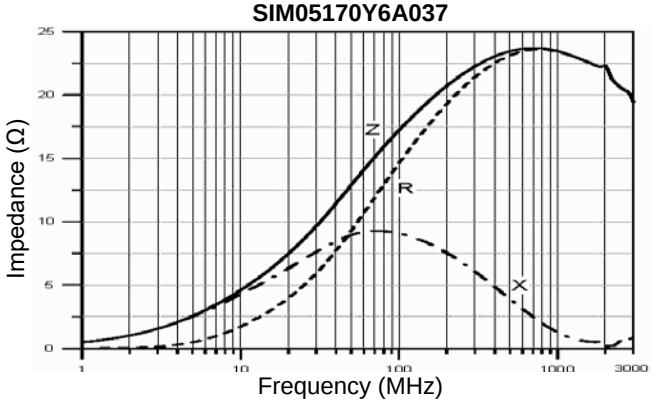

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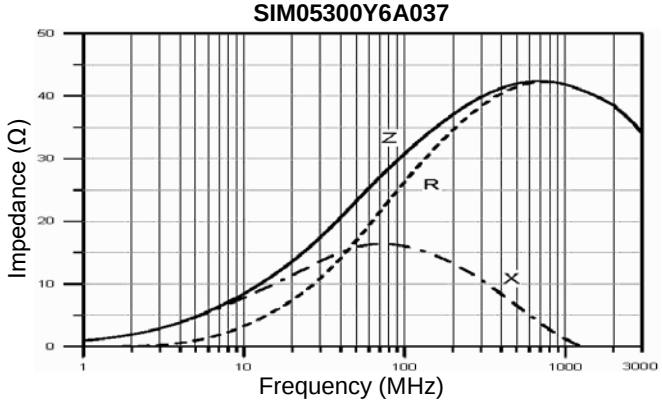

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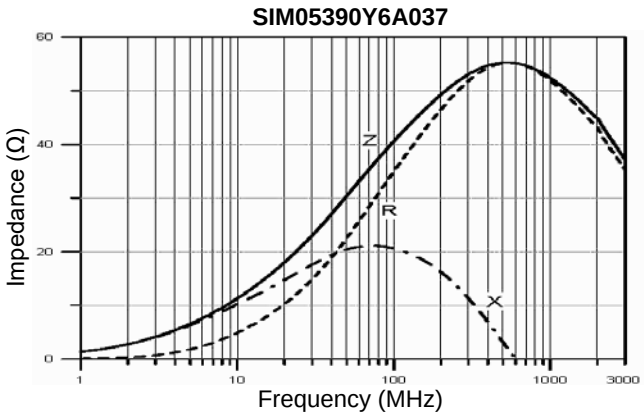

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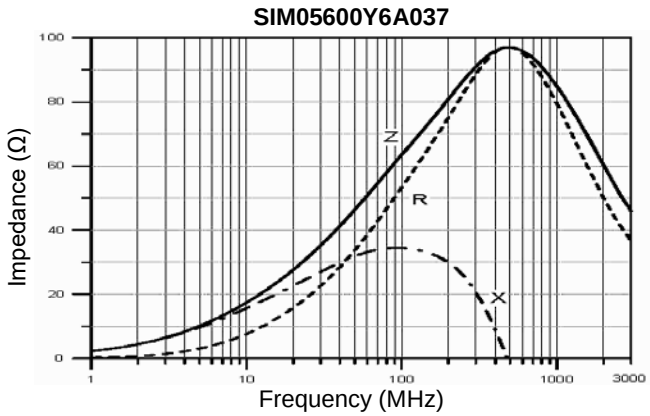

CHARICTERISTIC CURVES

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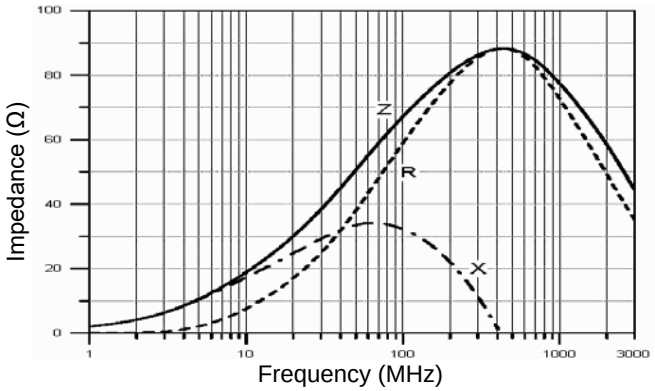

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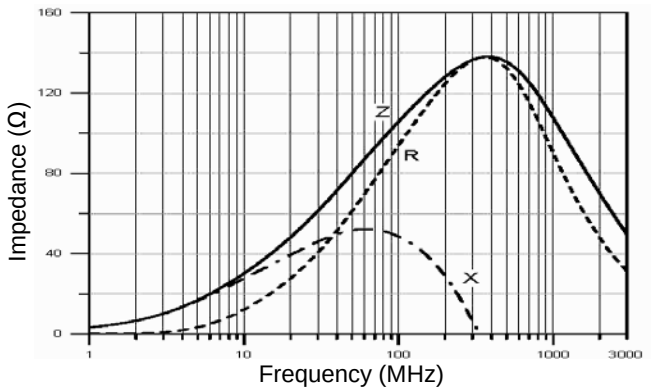

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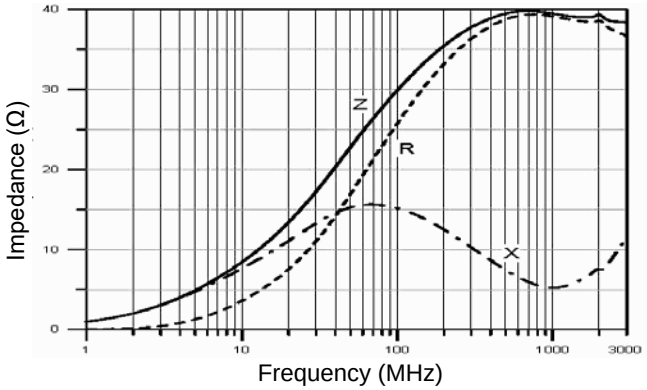

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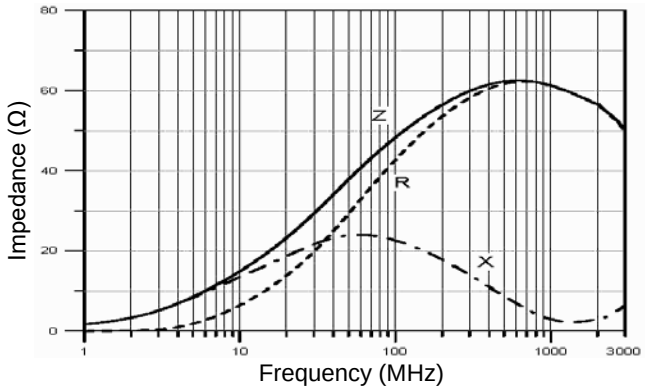

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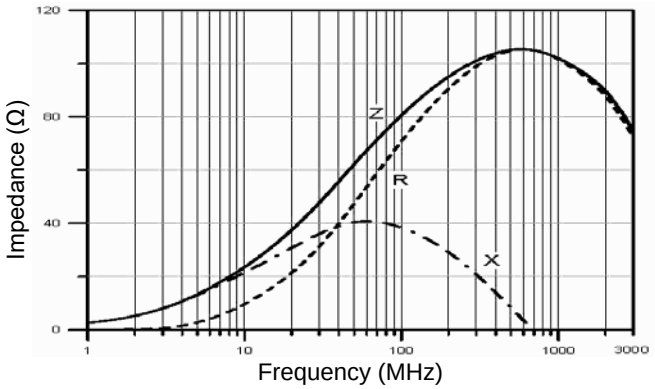

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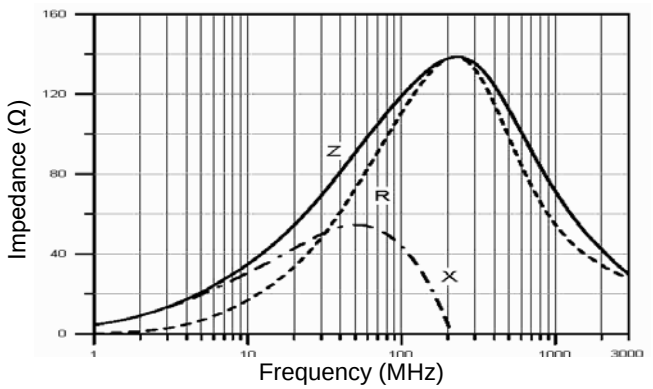

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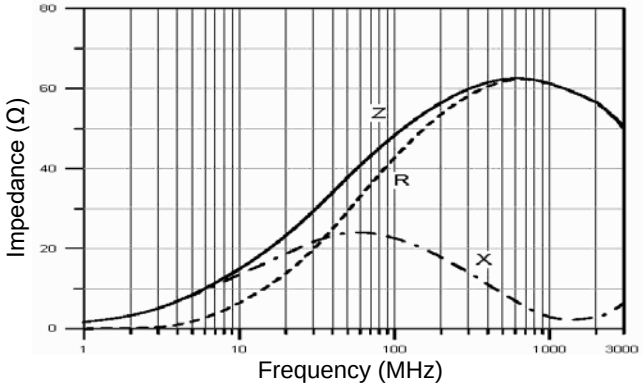

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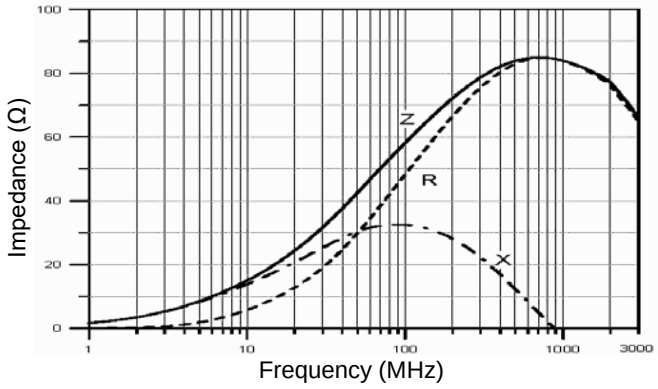

CHARICTERISTIC CURVES

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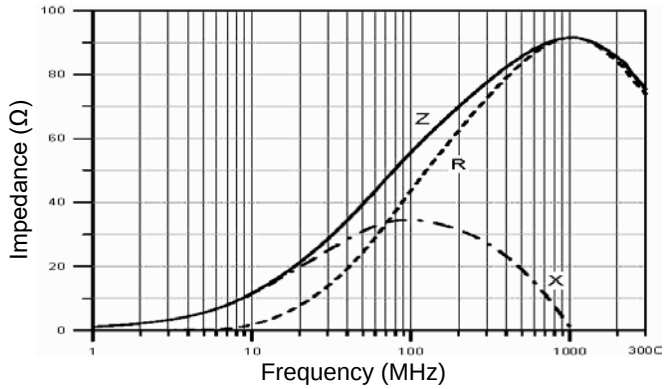

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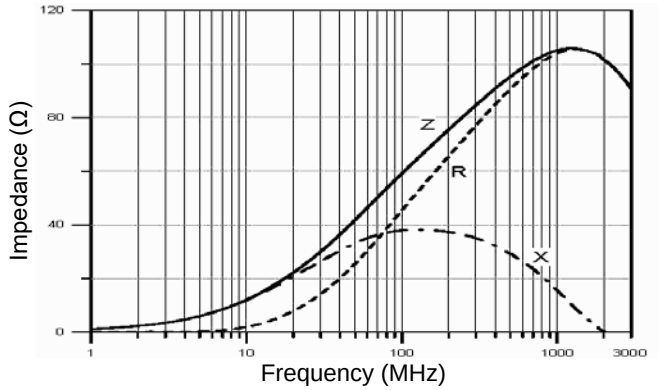

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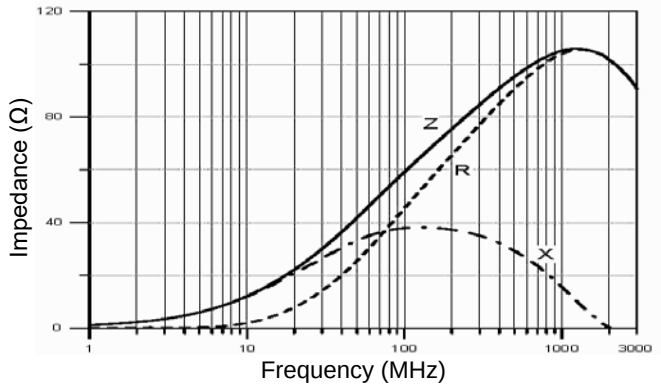

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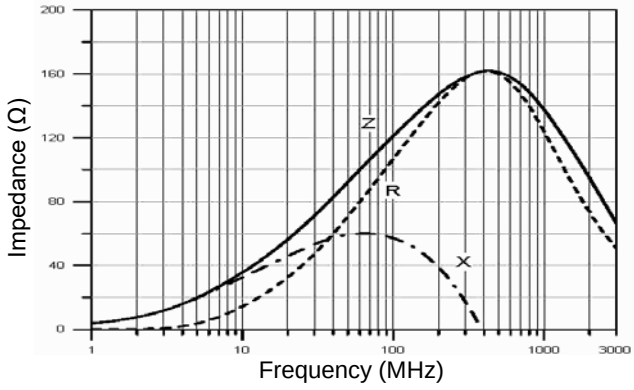

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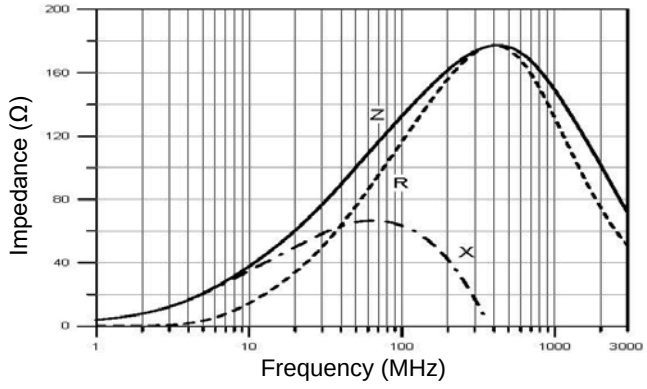

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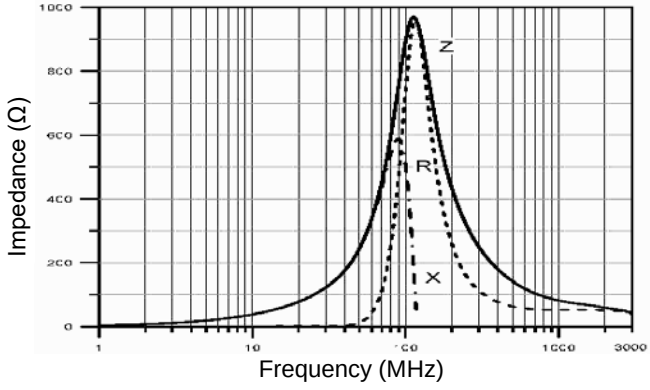

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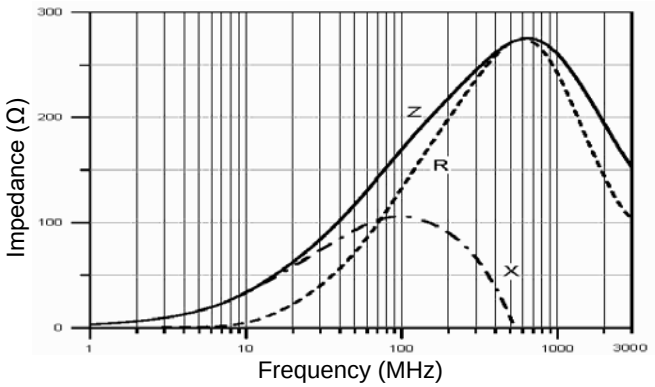

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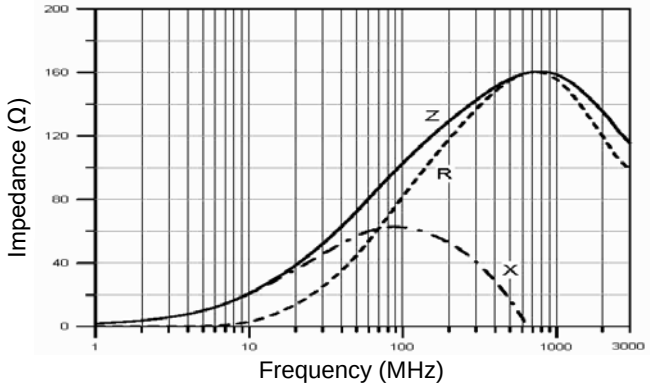

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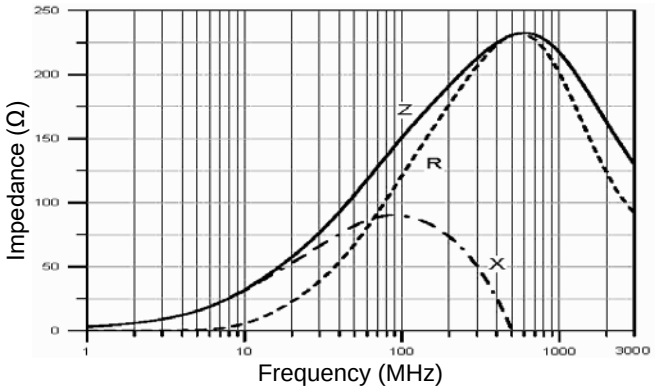

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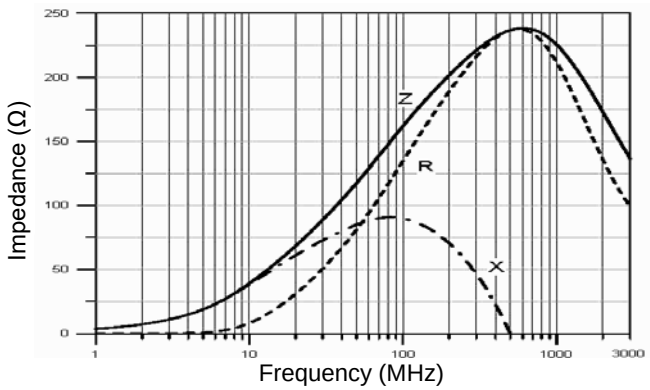

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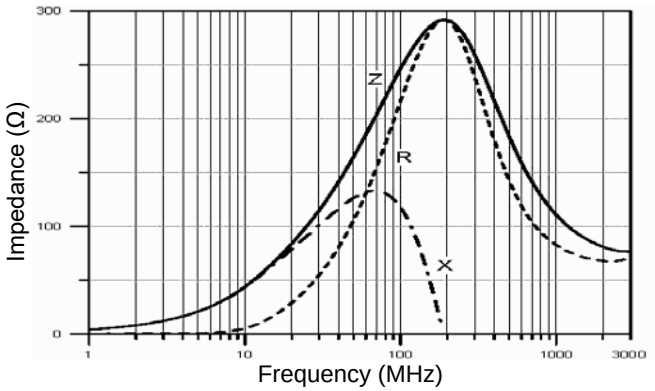

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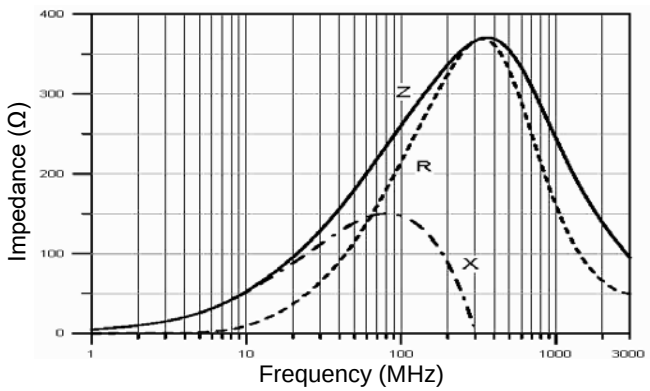

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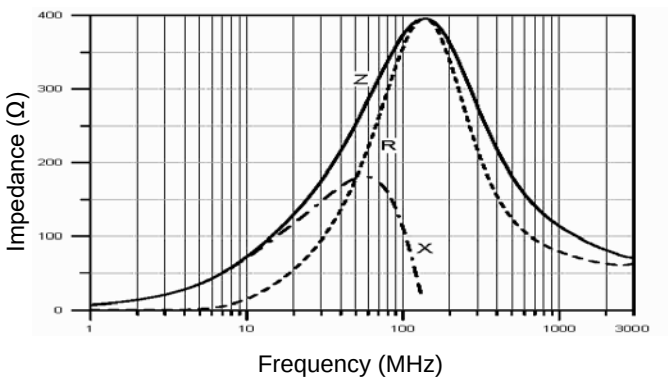

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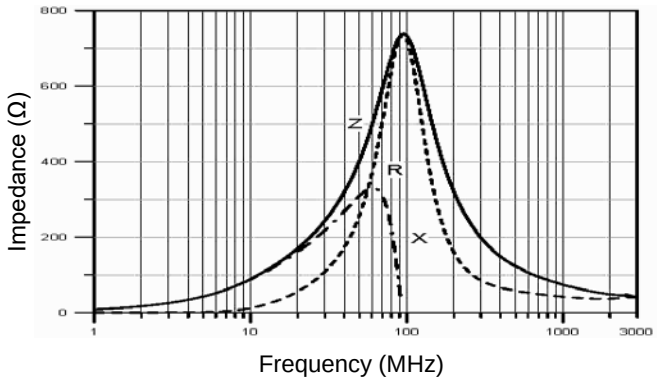

CHARICTERISTIC CURVES

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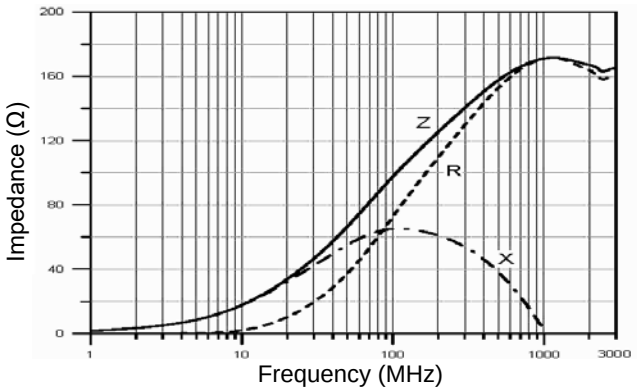

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High Current type

SIM-37 Series

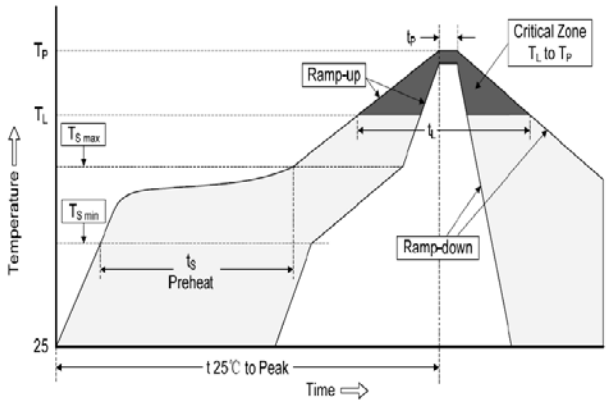
MERITEK

RELIABILITY TEST CONDITON AND REQUIREMENT

Item	Test Conditions	Requirement
Solderability	Solder: Sn-3Ag-0.5Cu, Solder temperature: 240±5°C, Depth: completely cover the termination. Dip time: 3±1sec.	More than 95% of coverage
Resistance to Soldering Heat	Solder temperature: 265±3°C for 6±1 seconds; Preheating: 100°C ~ 150°C for 1 min. Solder: Sn-3Ag-0.5Cu	Appearance: No damage. Electrical and Mechanical Characteristics shall be satisfied
Vibration	Oscillation Frequency: 10~2K~10 Hz, Direction: X, Y, X Testing Time: 12 hours (4 hours, 3 orientations)	Appearance: No damage. Impedance: within ±30% of initial value
Shock	Test condition: Type / Peak Value (g's) / Normal duration (ms) / Wave From / Velocity change (ft/sec) SMD / 100 / 6 / Half-sine / 12.3 Lead / 100 / 6 / Half-sine / 12.3	Appearance: No damage. Impedance: within ±30% of initial value
Terminal strength	With component mounted on a PCB apply a force 10N to the side of a device being tested. This force shall be applied for 10 +1 seconds. Also, the force shall be applied gradually as not to shock the component being tested.	Appearance: no damage.
Thermal Shock	Number of cycles: 1000. Condition for 1 cycle: No. / Temp. (°C) / Time (min.) 1 / -55±5°C / 30±3 2 / Room Temp. / 2 ~ 5 3 / +125±2°C / 30±3 4 / Room Temp. / 2 ~ 5 Measured at room temperature after placing for 24±2 hrs.	Appearance: No damage. Impedance: within ±30% of initial value
Bending	Device mounted on a test substrate, bend the substrate by 3mm, hold for 10sec and then return.	Appearance: The terminal electrode and the ferrite must not be damaged.
Load Humidity	Humidity: 85±2%R.H. Temperature: 85±2°C. Duration: 1000hrs Min. with 100% rated current. Measured at room temperature after 24±2 hrs.	Appearance: No damage. Impedance: within ±30% of initial value
Life Test	Temperature: 125±2°C, Duration: 1000±12 Hrs. Measured at room temperature after 24±2 Hrs.	Appearance: No damage. Impedance: within ±30% of initial value

RECOMMENDED SOLDERING PROFILES

Reflow Condition		
Pre Heat	**Temp. Min $T_{s(min)}$**	120°C
	Temp. Max $T_{s(max)}$	180°C
	Time (min. to max.) (t_s)	50 ~150 seconds
Reflow	**Temp. (T_L)**	230°C
	Time (min. to max.) (t_L)	90 ~120 seconds
Peak Temperature (T_P)		260°C
Time within 5°C of actual peak Temperature (t_p)		10 seconds max.
Reflow times:		3 times Max.



*Specifications subject to change without notice.