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Data Sheet

Customer: _____

Product : Automotive Multilayer Chip Beads

Size: 060303 、 100505 、 160808 、 201209 、 321611

Issued Date: _____

Edition : _____

Record of change

Date	Ver.	Description	Page

VENDOR :

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1. SCOPE

- ◆ This specification applies to the HABVS-060303、100505、160808、201209、321611 series Ferrite Chip EMI suppressors. °
- ◆ AEC-Q200 certified.

2. STANDARD ATMOSPHERIC CONDITIONS

Unless otherwise specified the standard range of atmospheric conditions for making measurements and tests is as follows:

- Ambient temperature : $20 \pm 15^{\circ}\text{C}$
- Relative humidity : 30~70%

If there may be any doubt on the results, measurements shall be made within the following limits :

- Ambient temperature : $25 \pm 5^{\circ}\text{C}$
- Relative humidity : 30~70%

3. RATINGS

SIZE 060303

PART NO.	IMP (Ω) $\pm 25\%$	BAND A m/m	TEST FREQUENCY	TEST VOLTAGE	DC RESISTANCE	RATED CURRENT
			IMP (MHz)	IMP (mV)	(Ω) Max	(mA) Max
HABVS06A100	10	0.1~0.2	100	500	0.10	500
HABVS06A1001A	10	0.1~0.2	100	500	0.05	1000
HABVS06A600	60	0.1~0.2	100	500	0.35	300
HABVS06A121	120	0.1~0.2	100	500	0.45	200
HABVS06A221	220	0.1~0.2	100	500	0.75	200
HABVS06A241	240	0.1~0.2	100	500	0.80	200
HABVS06A301	300	0.1~0.2	100	500	0.90	150
HABVS06A601	600	0.1~0.2	100	500	1.50	100

※ The maximum rated current : the DC current value having temperature increased 40°C after thru DC current 2 hours at ambient temperature.

SIZE 100505

TYPE : HABVS

PART NO.	IMP (Ω) \pm 25%	BAND A m/m	TEST FREQUENCY	TEST VOLTAGE	DC RESISTANCE	RATED CURRENT
			IMP (MHz)	IMP (mV)	(Ω) Max	(mA) Max
HABVS10A100 1A	10	0.1~0.3	100	500	0.05	1000
HABVS10A100 1A RDC025	10	0.1~0.3	100	500	0.025	1000
HABVS10A220 0.5A	22	0.1~0.3	100	500	0.08	500
HABVS10A300	30	0.1~0.3	100	500	0.20	300
HABVS10A300 0.5A	30	0.1~0.3	100	500	0.15	500
HABVS10A300 1A	30	0.1~0.3	100	500	0.08	1000
HABVS10A300 1.7A	30	0.1~0.3	100	500	0.05	1700
HABVS10A470 0.6A	47	0.1~0.3	100	500	0.13	600
HABVS10A600 0.5A	60	0.1~0.3	100	500	0.15	500
HABVS10A700 1.2A	70	0.1~0.3	100	500	0.09	1200
HABVS10A800 0.5A	80	0.1~0.3	100	500	0.15	500
HABVS10A101 0.5A	100	0.1~0.3	100	500	0.25	500
HABVS10A121 0.5A	120	0.1~0.3	100	500	0.25	500
HABVS10A121 0.55A RDC19	120	0.1~0.3	100	500	0.19	550
HABVS10A181 RDC3	180	0.1~0.3	100	500	0.30	400
HABVS10A221 RDC28	220	0.1~0.3	100	500	0.28	700
HABVS10A221 0.3A	220	0.1~0.3	100	500	0.30	300
HABVS10A301 0.3A	300	0.1~0.3	100	500	0.40	300
HABVS10A471	470	0.1~0.3	100	500	0.90	100
HABVS10A601 0.2A	600	0.1~0.3	100	500	0.80	200
HABVS10A601 0.3A	600	0.1~0.3	100	500	0.60	300
HABVS10A102 0.2A	1000	0.1~0.3	100	500	1.00	200
HABVS10A102 RDC58	1000	0.1~0.3	100	500	0.58	300
HABVS10A182 0.1A	1800	0.1~0.3	100	500	1.15	100
HABVS10H121	120	0.1~0.3	100	500	0.55	300
HABVS10B471 RDC5	470	0.1~0.3	100	500	0.50	300
HABVS10B601 0.3A	600	0.1~0.3	100	500	0.50	300

※ The maximum rated current : the DC current value having temperature increased 40 °C after thru DC current 2 hours at ambient temperature.

SIZE 160808

TYPE : HABVS

PART NO.	IMP (Ω) \pm 25%	BAND A m/m	TEST FREQUENCY	TEST VOLTAGE	DC RESISTANCE	RATED CURRENT
			IMP (MHz)	IMP (mV)	(Ω) Max	(mA) Max
HABVS16A300	30	0.2~0.6	100	500	0.10	400
HABVS16A300 RDC05	30	0.2~0.6	100	500	0.05	1000
HABVS16A300RDC015A	30	0.2~0.6	100	500	0.01	5000
HABVS16A600 RDC1	60	0.2~0.6	100	500	0.10	500
HABVS16A800	80	0.2~0.6	100	500	0.15	400
HABVS16A121	120	0.2~0.6	100	500	0.15	400
HABVS16A121 3A	120	0.2~0.6	100	500	0.04	3000
HABVS16A221	220	0.2~0.6	100	500	0.2	400
HABVS16A221RDC05	220	0.2~0.6	100	500	0.05	3000
HABVS16A301	300	0.2~0.6	100	500	0.3	400
HABVS16A471	470	0.2~0.6	100	500	0.45	350
HABVS16A601 0.3A	600	0.2~0.6	100	500	0.35	300
HABVS16A601 1A	600	0.2~0.6	100	500	0.3	1000
HABVS16A102	1000	0.2~0.6	100	500	0.55	300
HABVS16A102 RDC25	1000	0.2~0.6	100	500	0.25	800
HABVS16B800	80	0.2~0.6	100	500	0.25	450
HABVS16B800 RDC1	80	0.2~0.6	100	500	0.10	800
HABVS16B601	600	0.2~0.6	100	500	0.40	450
HABVS16H100 0.5A RDC05	10	0.2~0.6	100	500	0.05	500
HABVS16H110 0.5A RDC05	11	0.2~0.6	100	500	0.05	500
HABVS16H750 0.5A	75	0.2~0.6	100	500	0.30	500
HABVS16H121 0.2A	120	0.2~0.6	100	500	0.20	200
HABVS16H601	600	0.2~0.6	100	500	0.65	300
HABVS16H102	1000	0.2~0.6	100	500	1.10	50
HABVS16K102 0.2A	1000	0.2~0.6	100	500	0.60	200
HABVS16K152 0.3A	1500	0.2~0.6	100	500	0.60	300
HABVS16K182 0.2A	1800	0.2~0.6	100	500	0.75	200
HABVS16K202 0.2A	2000	0.2~0.6	100	500	0.75	200
HABVS16K222 RDC8	2200	0.2~0.6	100	500	0.80	50
HABVS16K222 0.2A	2200	0.2~0.6	100	500	0.75	200
HABVS16K252	2500	0.2~0.6	100	500	1.00	50

※ The maximum rated current : the DC current value having temperature increased 40 °C after thru DC current 2 hours at ambient temperature.

SIZE 201209

TYPE : HABVS

PART NO.	IMP (Ω) \pm 25%	BAND A m/m	TEST FREQUENCY	TEST VOLTAGE	DC RESISTANCE	RATED CURRENT
			IMP (MHz)	IMP (mV)	(Ω) Max	(mA) Max
HABVS20A300 5A	30	0.2~0.8	100	500	0.01	5000
HABVS20A600 0.5A	60	0.2~0.8	100	500	0.15	500
HABVS20A600 RDC02	60	0.2~0.8	100	500	0.02	4000
HABVS20A800 0.5A	80	0.2~0.8	100	500	0.15	500
HABVS20A121	120	0.2~0.8	100	500	0.20	300
HABVS20A1213A	120	0.2~0.8	100	500	0.04	3000
HABVS20A221	220	0.2~0.8	100	500	0.25	300
HABVS20A221RDC04	220	0.2~0.8	100	500	0.04	3000
HABVS20A301	300	0.2~0.8	100	500	0.25	300
HABVS20A331 3A	330	0.2~0.8	100	500	0.05	3000
HABVS20A431	430	0.2~0.8	100	500	0.35	300
HABVS20A471	470	0.2~0.8	100	500	0.35	300
HABVS20A601	600	0.2~0.8	100	500	0.35	300
HABVS20A601RDC3	600	0.2~0.8	100	500	0.30	500
HABVS20A6012A	600	0.2~0.8	100	500	0.10	2000
HABVS20A102 0.2A	1000	0.2~0.8	100	500	0.45	200
HABVS20A1021.5A	1000	0.2~0.8	100	500	0.12	1500
HABVS20A122	1200	0.2~0.8	100	500	0.60	300
HABVS20A1521A	1500	0.2~0.8	100	500	0.30	1000
HABVS20B121	120	0.2~0.8	100	500	0.20	300
HABVS20B222	2200	0.2~0.8	100	500	0.50	200
HABVS20K1020.2A	1000	0.2~0.8	100	500	0.45	200
HABVS20K152	1500	0.2~0.8	100	500	0.45	200
HABVS20K182	1800	0.2~0.8	100	500	0.60	200
HABVS20K202	2000	0.2~0.8	100	500	0.60	200
HABVS20K2021A	2000	0.2~0.8	100	500	0.30	1000
HABVS20K252	2500	0.2~0.8	100	500	0.70	200
HABVS20K252 0.4A	2500	0.2~0.8	100	500	0.50	400
HABVS20K272	2700	0.2~0.8	100	500	0.70	200

※ The maximum rated current : the DC current value having temperature increased 40 °C after thru DC current 2 hours at ambient temperature.

SIZE 321611

TYPE : HABVS

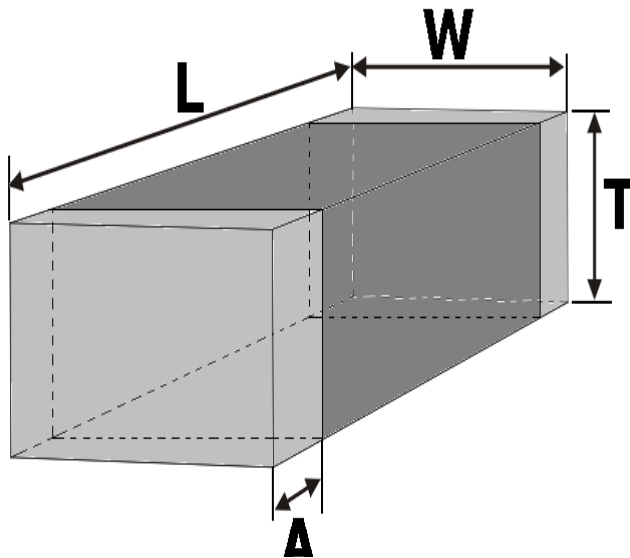
PART NO.	IMP (Ω) \pm 25%	BAND A m/m	TEST FREQUENCY	TEST VOLTAGE	DC RESISTANCE	RATED CURRENT
			IMP (MHz)	IMP (mV)	(Ω) Max	(mA) Max
HABVS32A300	30	0.4~1.0	100	500	0.10	800
HABVS32A600	60	0.4~1.0	100	500	0.15	500
HABVS32A800 4A	80	0.4~1.0	100	500	0.02	4000
HABVS32A121 RDC15	120	0.4~1.0	100	500	0.15	500
HABVS32A121 RDC025	120	0.4~1.0	100	500	0.025	3000
HABVS32A121 RDC012	120	0.4~1.0	100	500	0.012	6000
HABVS32A301 3A	300	0.4~1.0	100	500	0.06	3000
HABVS32A471 0.4A	470	0.4~1.0	50	500	0.20	400
HABVS32A601	600	0.4~1.0	100	500	0.25	350
HABVS32A601 2A	600	0.4~1.0	100	500	0.08	2000
HABVS32A102 50M	1000	0.4~1.0	100	500	0.40	350
HABVS32A102 1A	1000	0.4~1.0	100	500	0.30	1000
HABVS32A102 1.5A	1000	0.4~1.0	100	500	0.15	1500
HABVS32A122 50M	1200	0.4~1.0	100	500	0.35	350
HABVS32A152 50M	1500	0.4~1.0	100	500	0.40	350
HABVS32A152 0.5A 50M	1500	0.4~1.0	50	500	0.30	500
HABVS32K102 0.5A	1000	0.4~1.0	100	500	0.35	500

※ The maximum rated current : the DC current value having temperature increased 40 °C after thru DC current 2 hours at ambient temperature.

**** If you have any request not find from above datas, please contact our sales for further information, we may do our best to meet your request.**

3. DIMENSION

TYPE : HABVSVS



OPERATING TEMP RANGE : -55°C ~ +125°C

STORAGE TEMP RANGE : -40°C ~ +85°C

TYPE	L	W	T	A(m/m)
HABVS-060303	0.6±0.03 (0.024±0.001)	0.3±0.03 (0.012±0.001)	0.3±0.03 (0.012±0.001)	0.1~0.2 (0.004~0.008)

TYPE	L	W	T	A(m/m)
HAHVS-100505	1.0±0.05 (0.039±0.002)	0.5±0.05 (0.20±0.002)	0.5±0.05 (0.20±0.002)	0.1~0.3

TYPE	L	W	T	A(m/m)
HAHVS-160808	1.6±0.15 (0.063±0.006)	0.8±0.15 (.031±.006)	0.8±0.15 (.031±0.006)	0.2~0.6

TYPE	L	W	T	A(m/m)
HAHVS-201209	2±0.2 (0.063±0.006)	1.25±0.2 (0.049±0.008)	0.9-0.2/±0.15 (0.035-0.008±0.006)	0.2~0.8 (0.008~0.031)

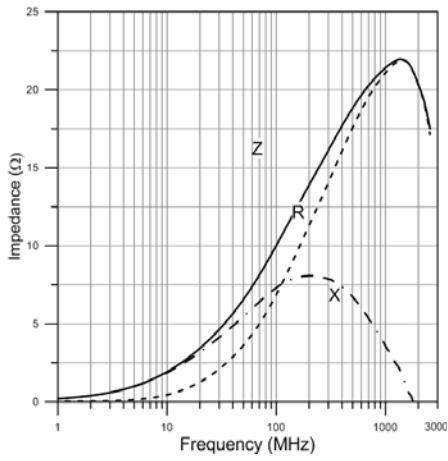
TYPE	L	W	T	A(m/m)
HAHVS-321611	3.2±0.2 (0.126±0.008)	1.6±0.2 (0.063±0.008)	1.1±0.2 (0.043±0.008)	0.4~1 (0.016~0.039)

4. The place of origin : Taiwan

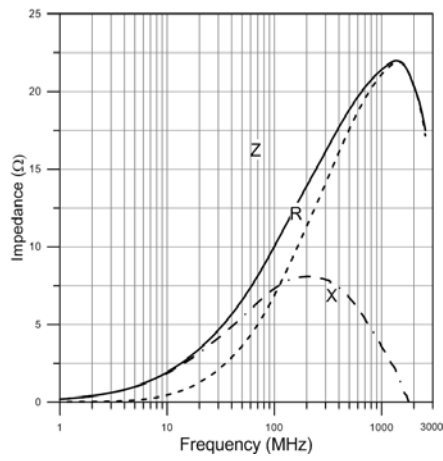
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TYPE : HABVS

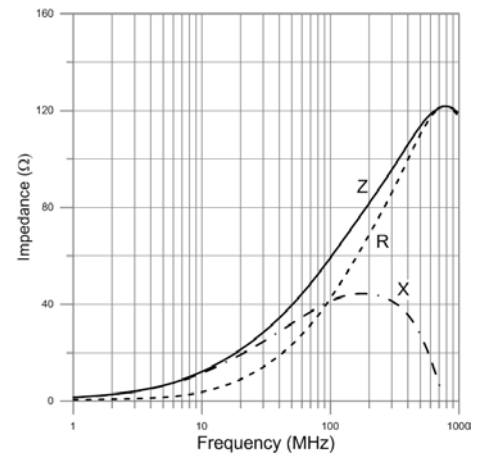
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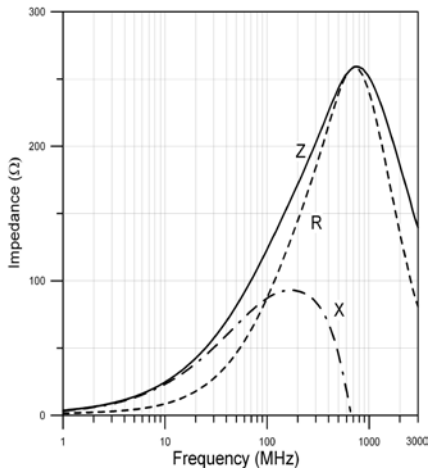
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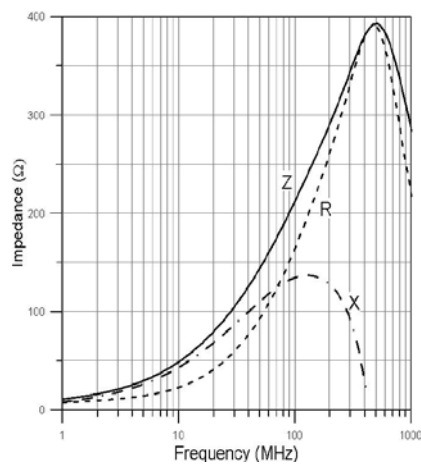
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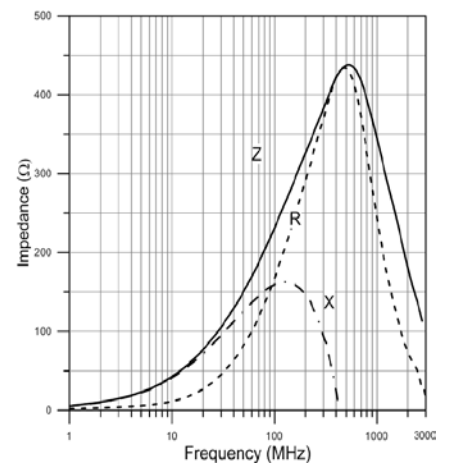
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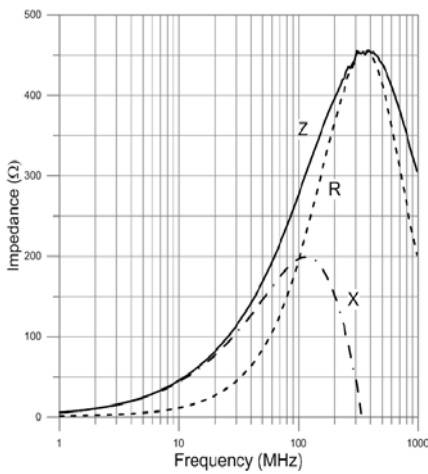
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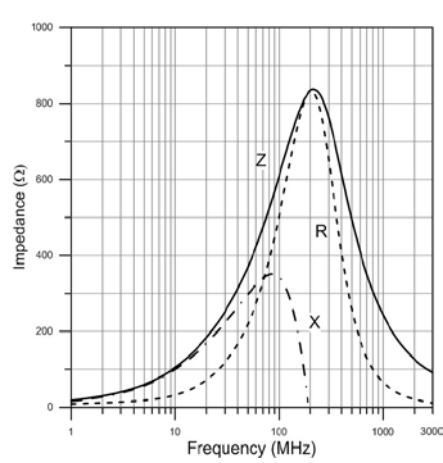
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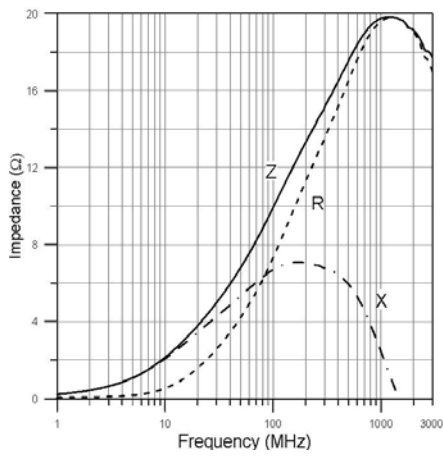
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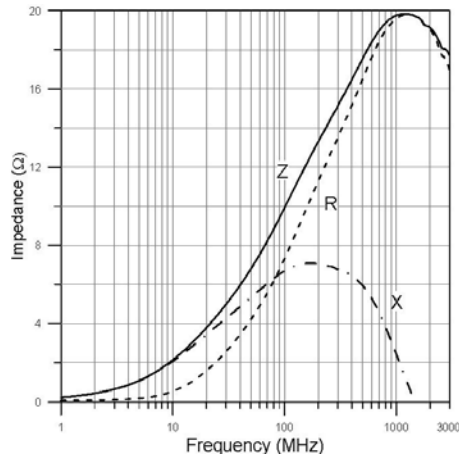
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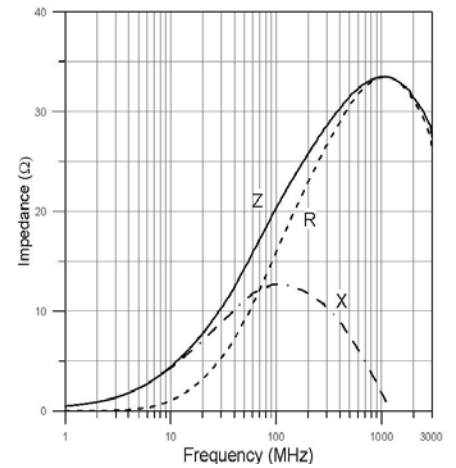
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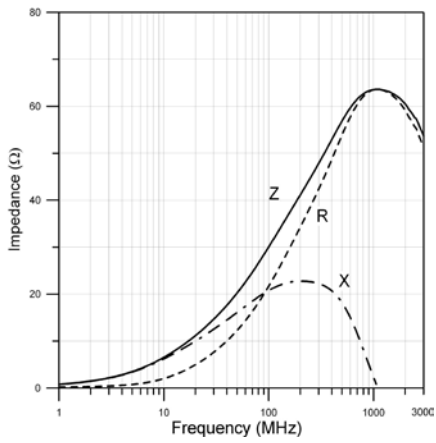
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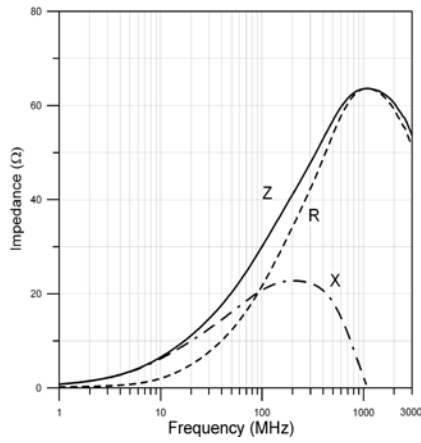
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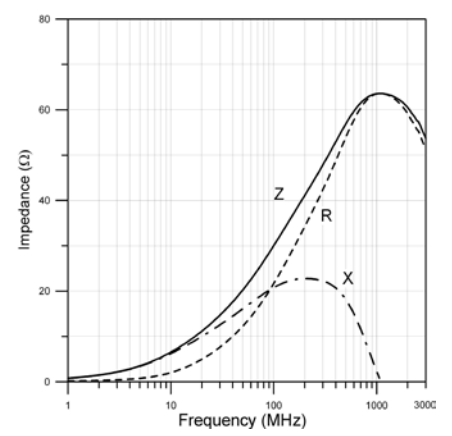
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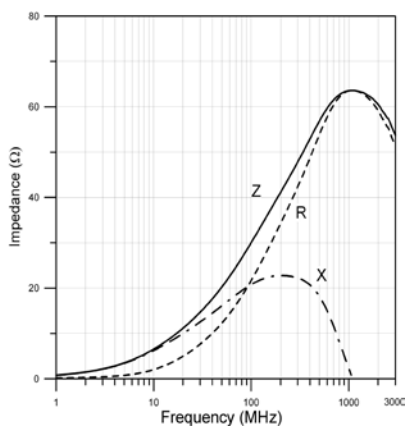
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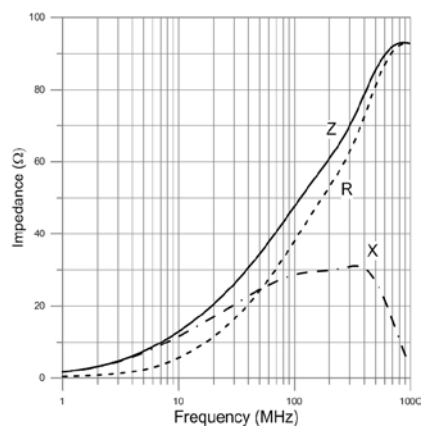
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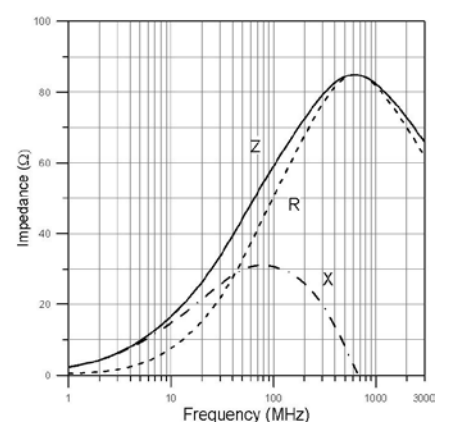
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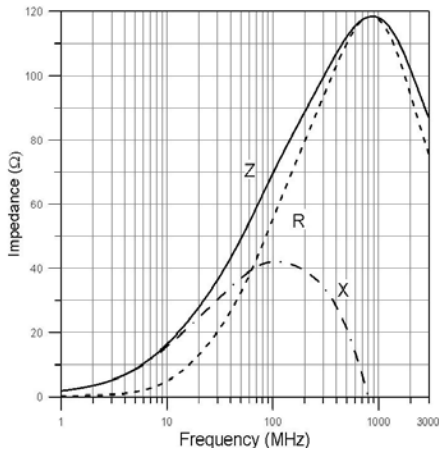
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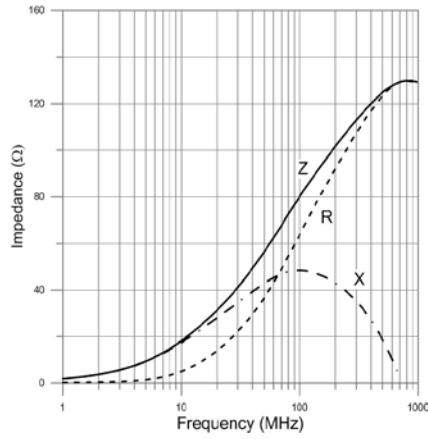
SIZE 100505

TYPE : HABVS

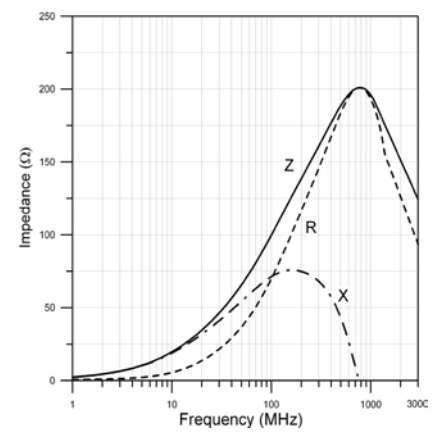
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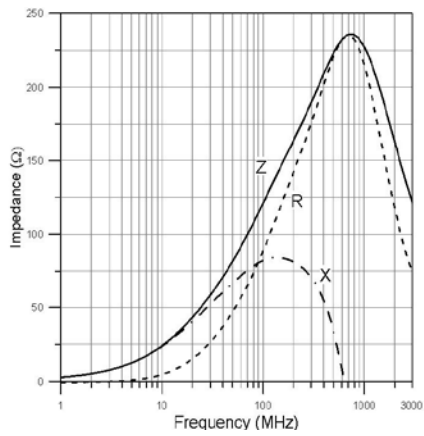
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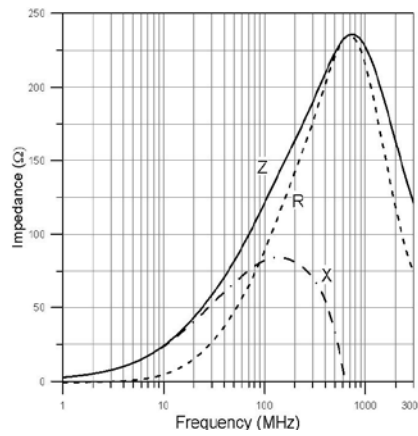
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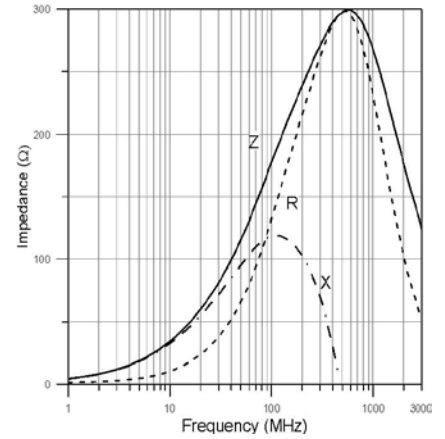
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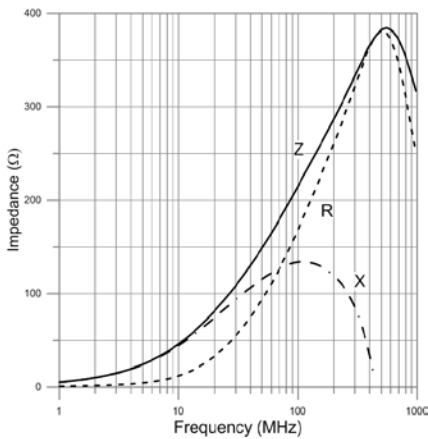
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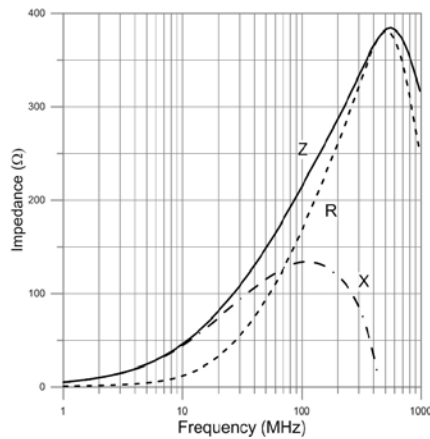
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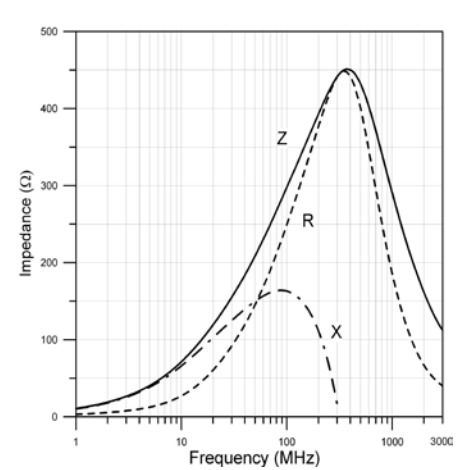
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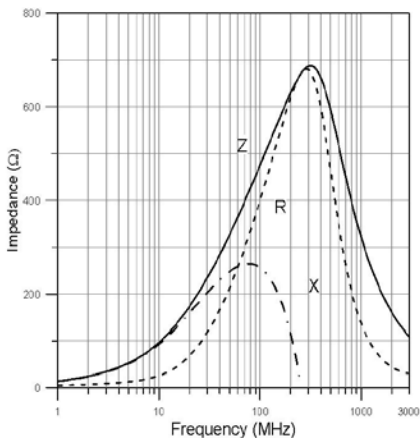
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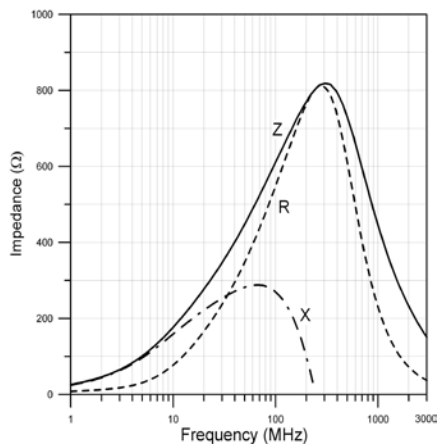
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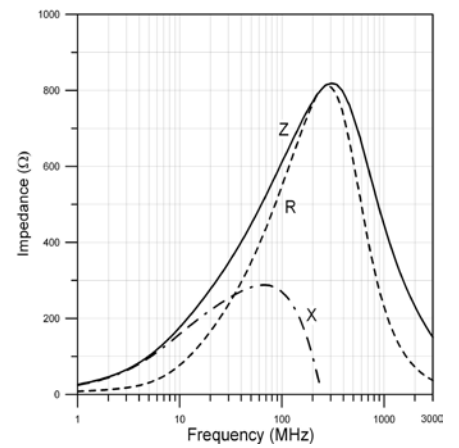
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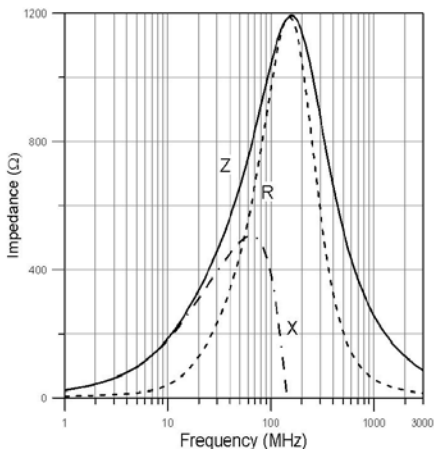
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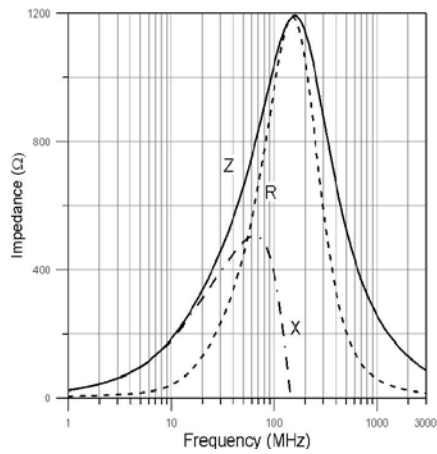
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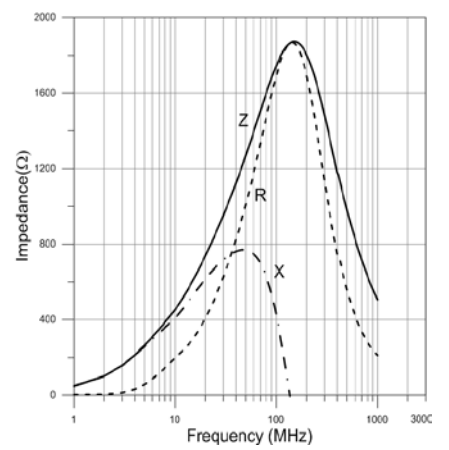
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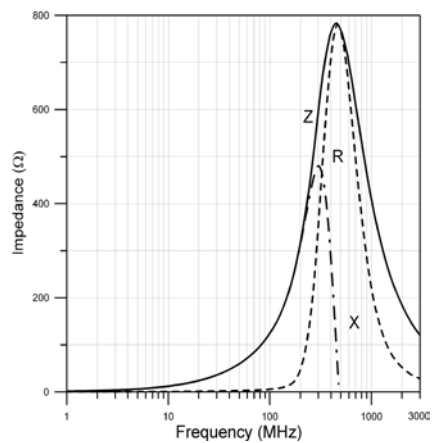
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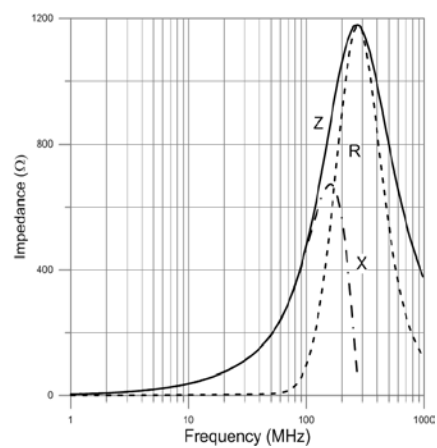
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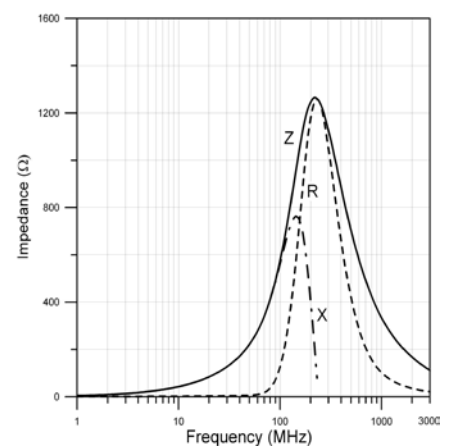
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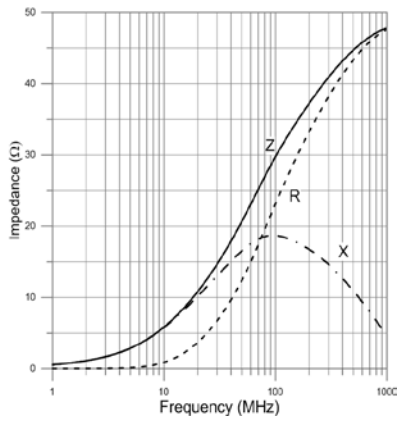
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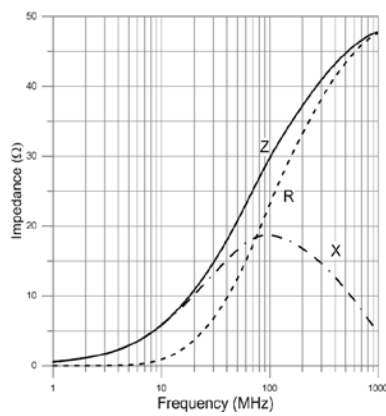
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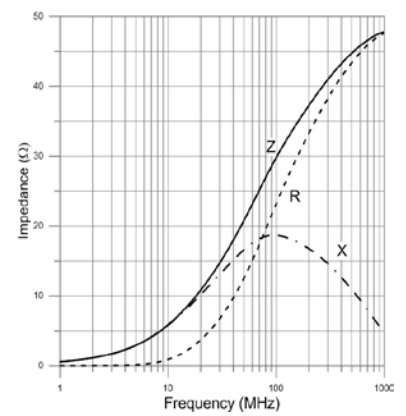
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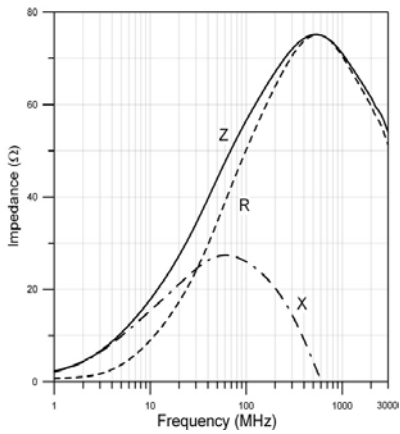
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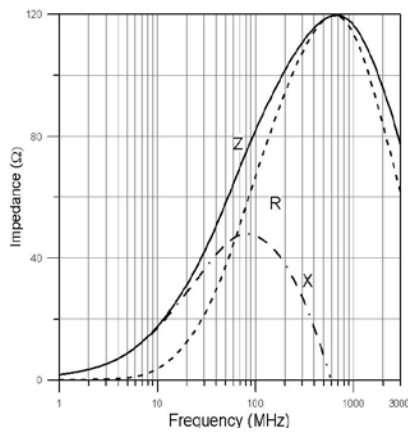
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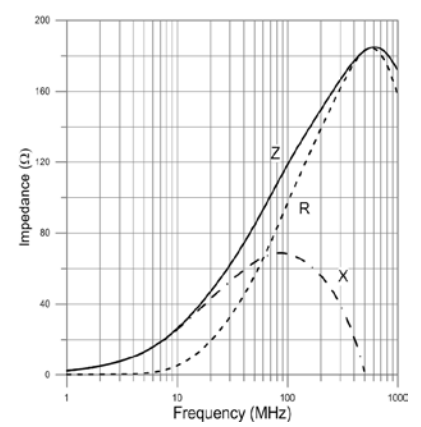
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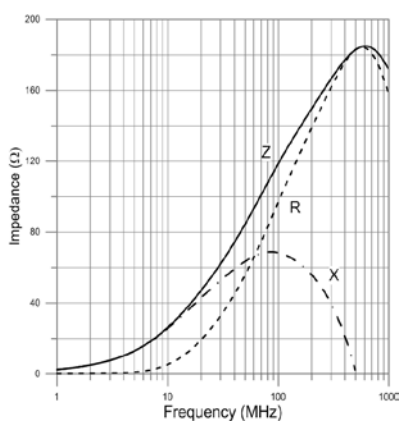
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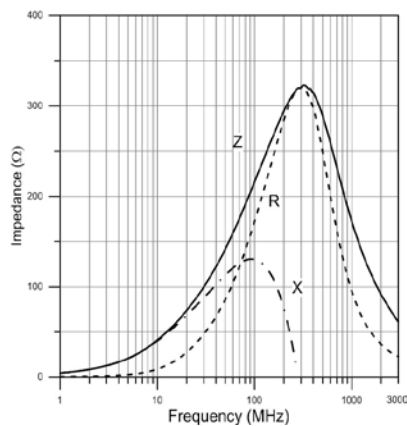
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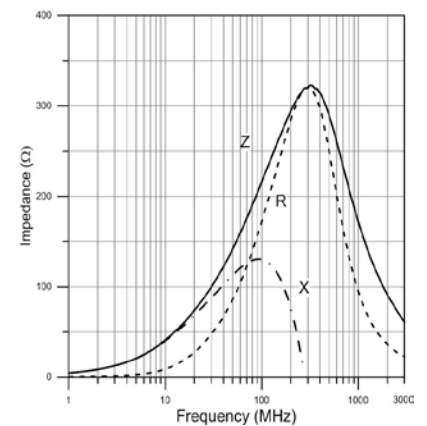
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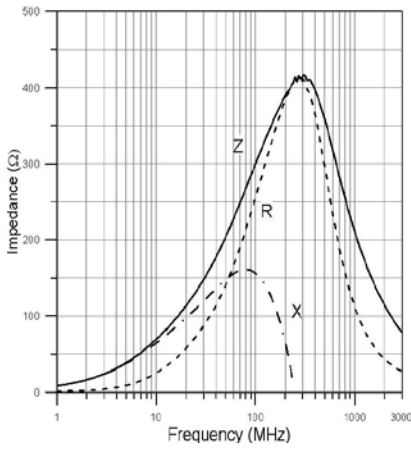
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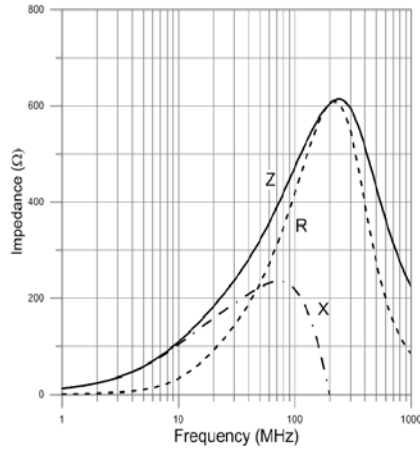
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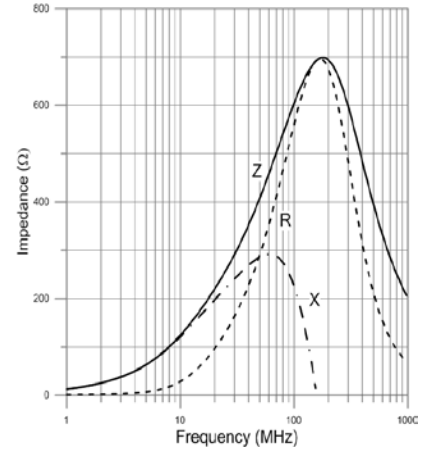
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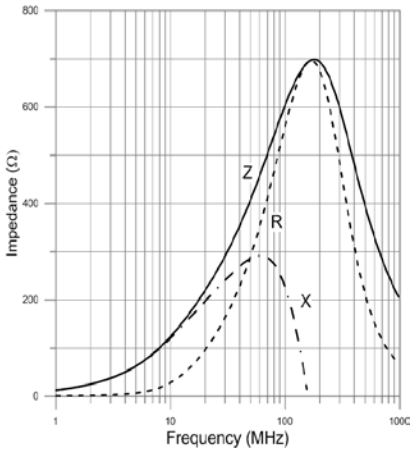
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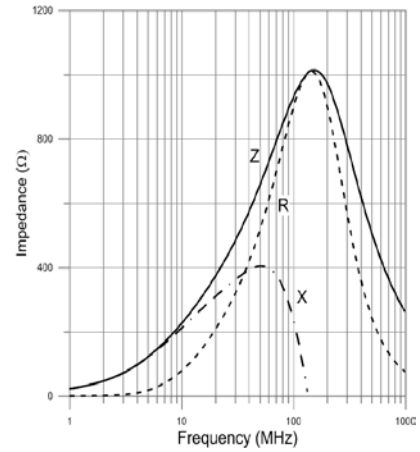
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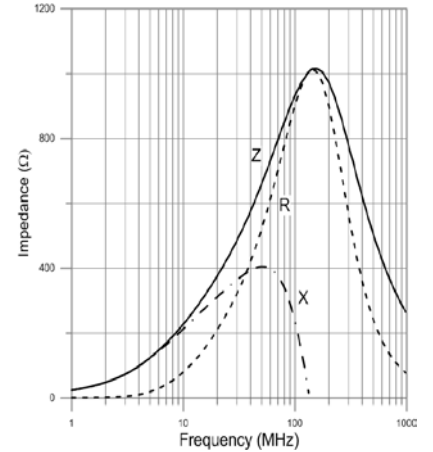
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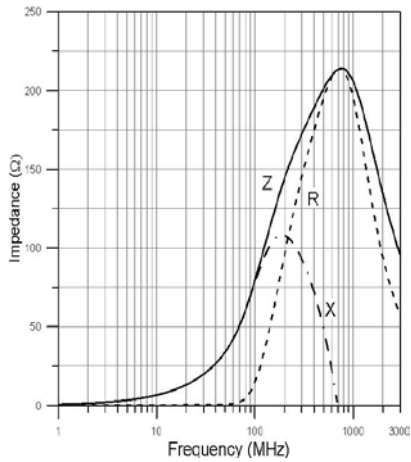
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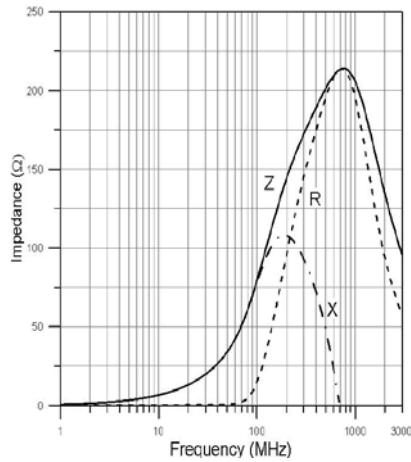
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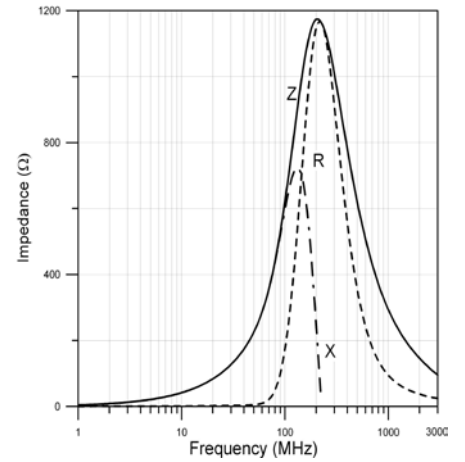
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HABVS16B800 RDC1



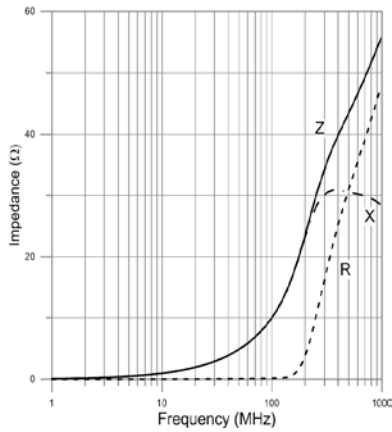
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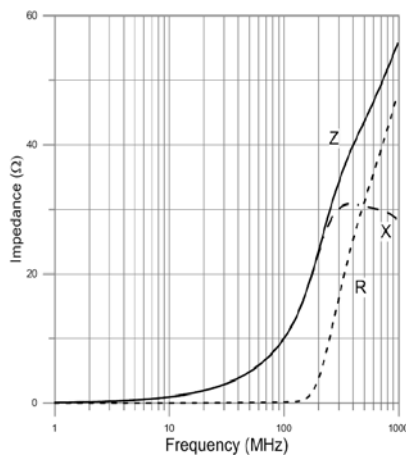
SIZE 160808

TYPE : HABVS

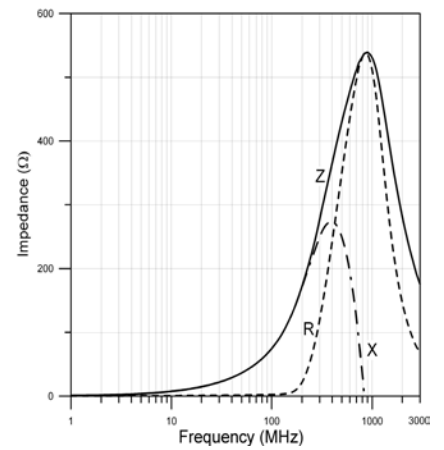
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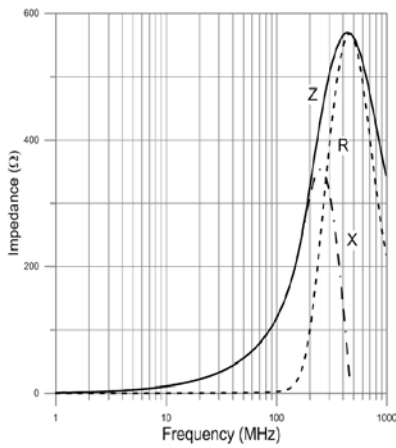
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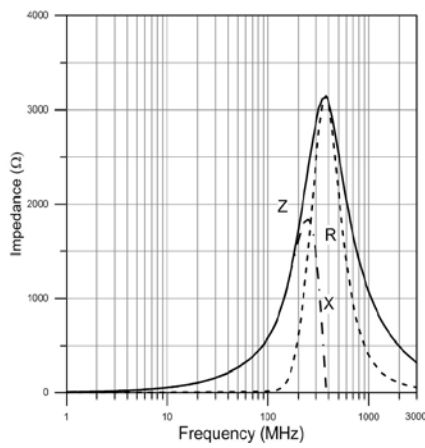
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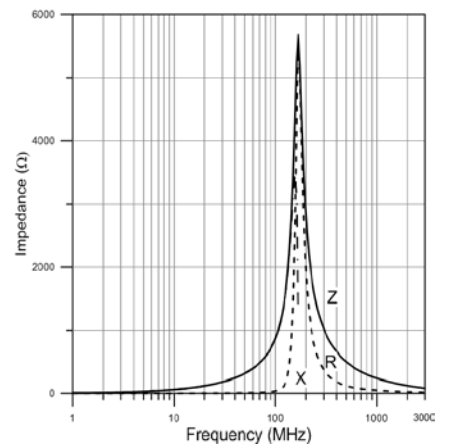
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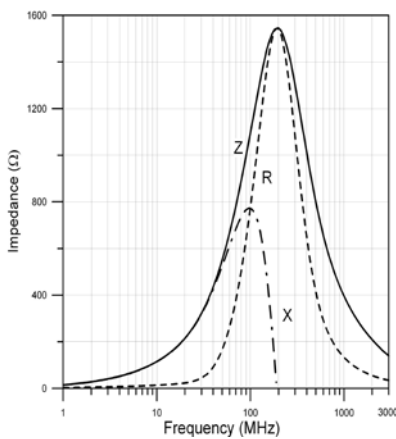
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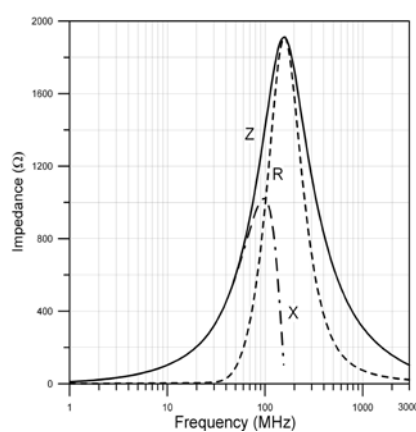
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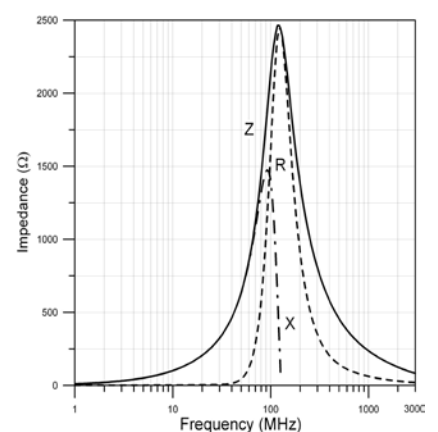
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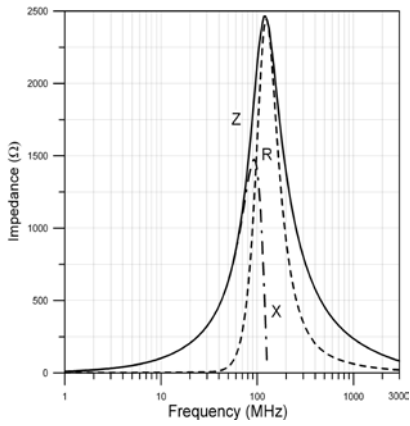
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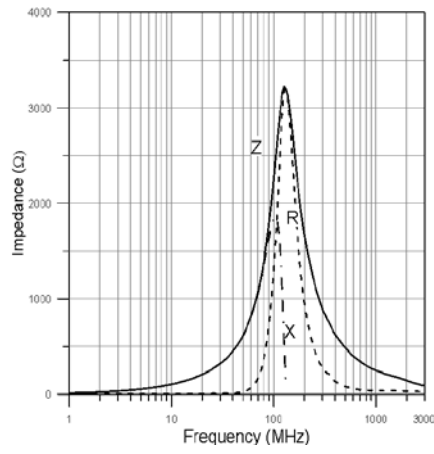
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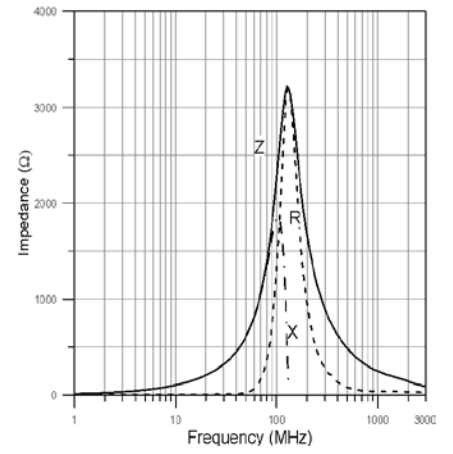
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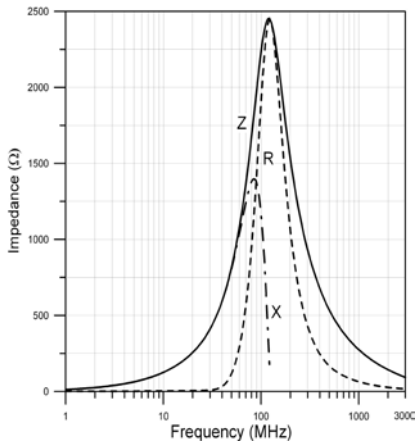
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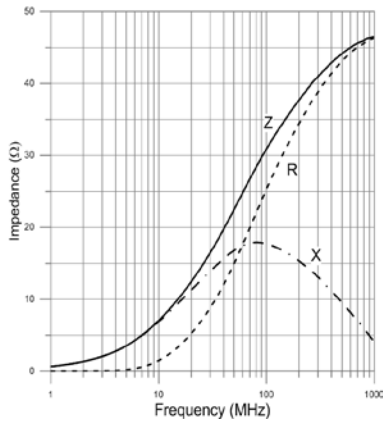


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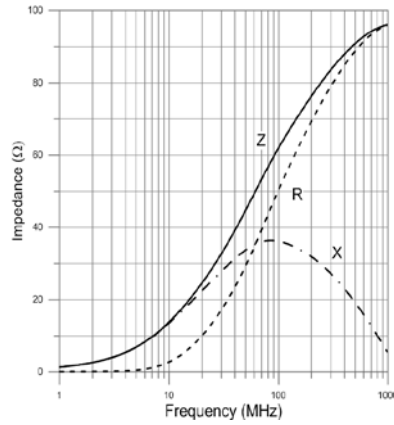


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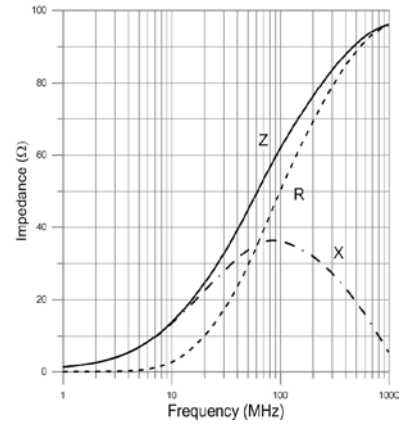
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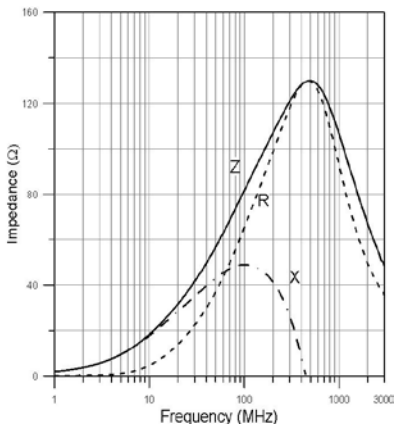
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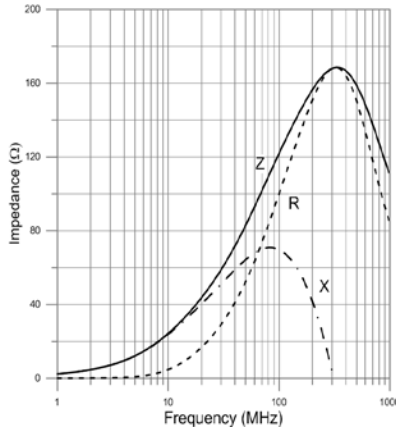
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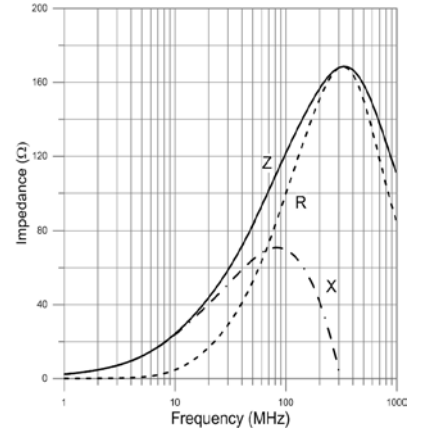
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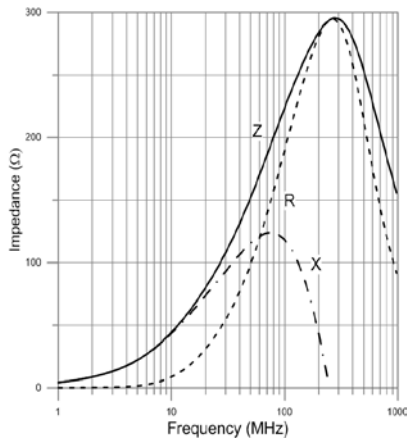
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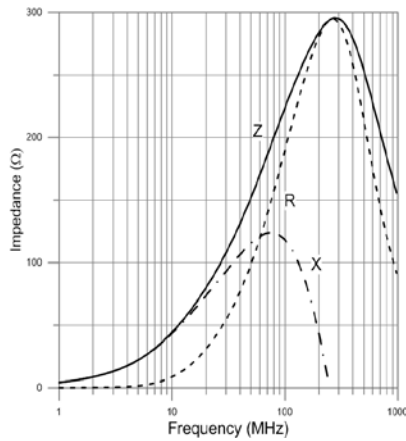
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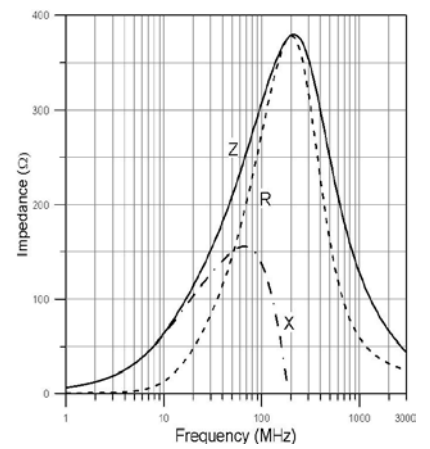
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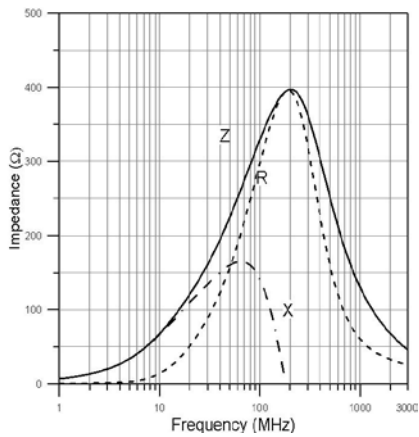
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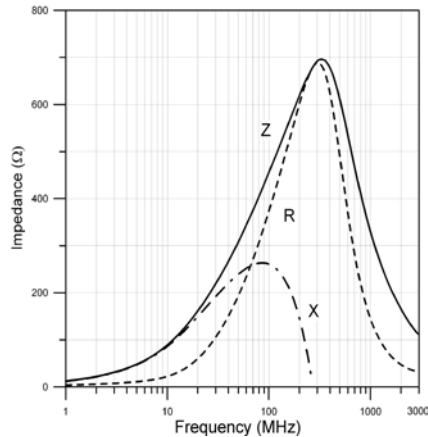
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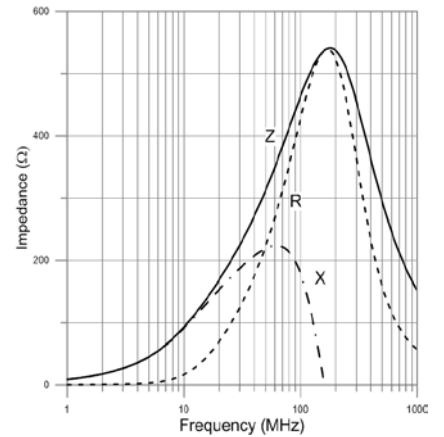
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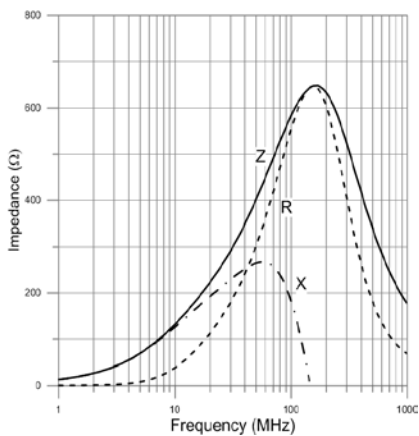
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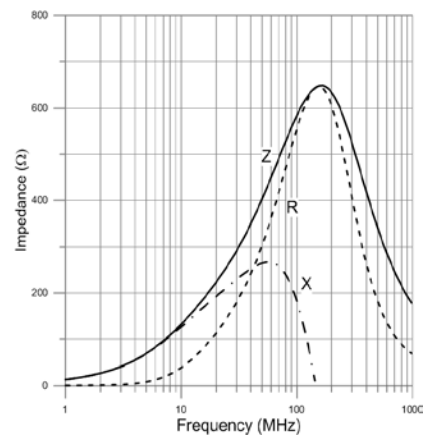
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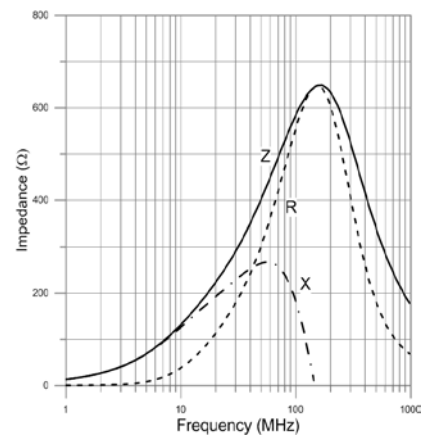
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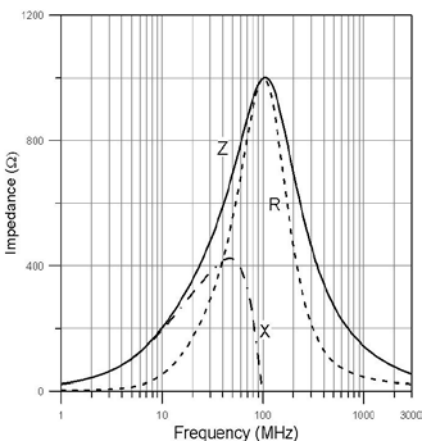
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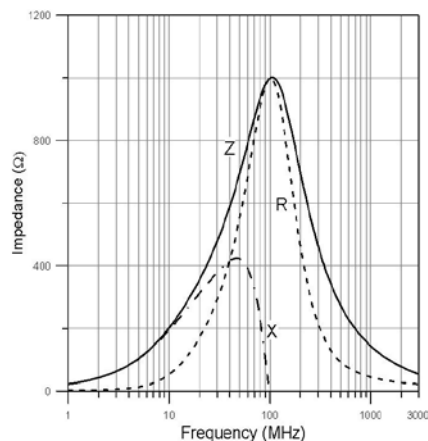
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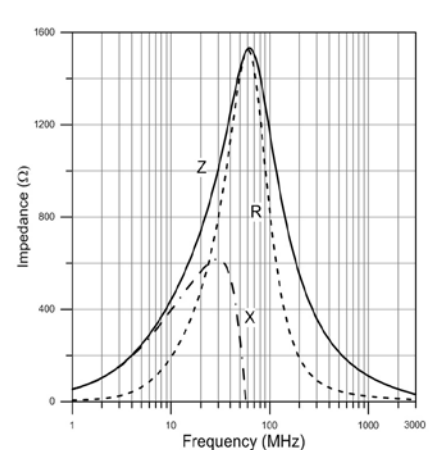
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HABVS20A102 1.5A

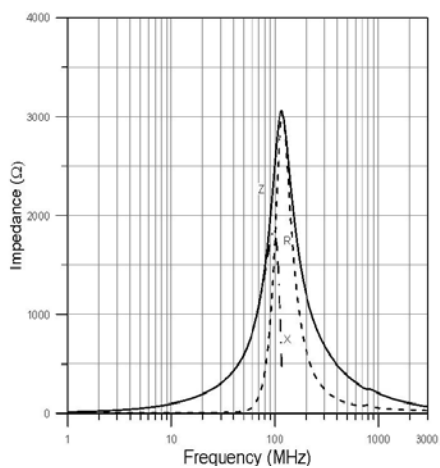


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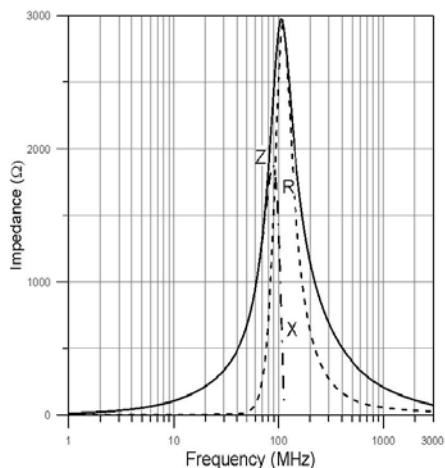


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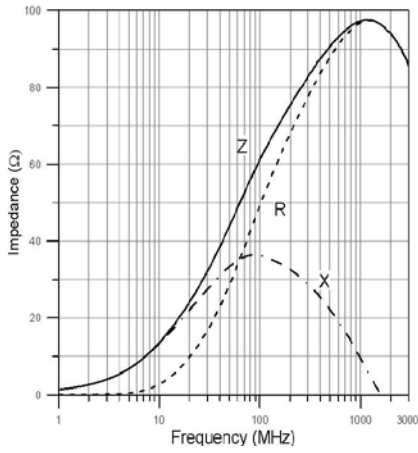


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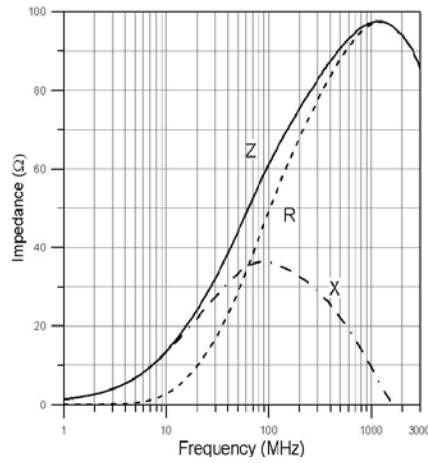


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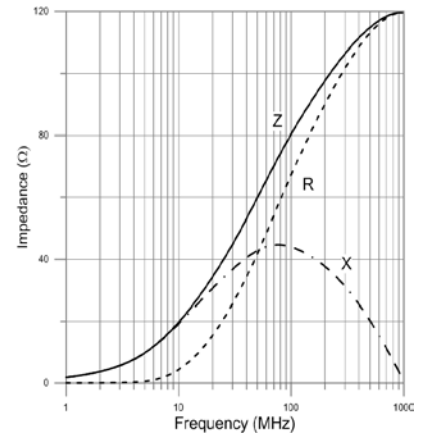
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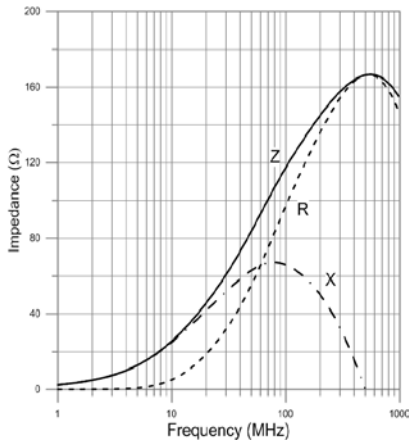
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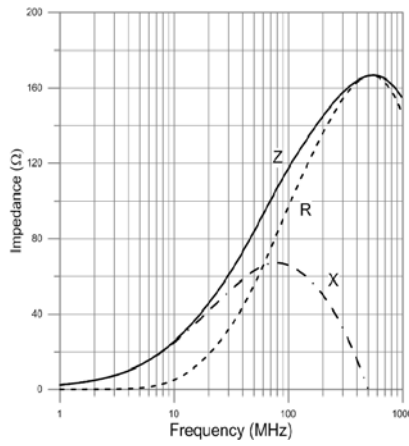
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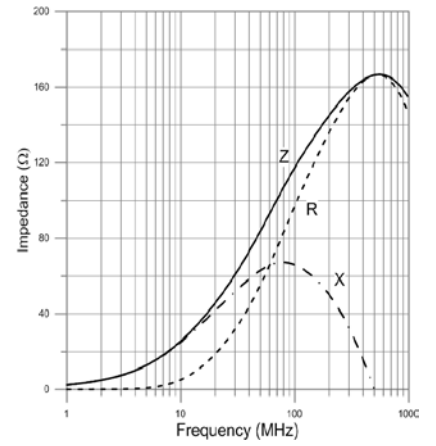
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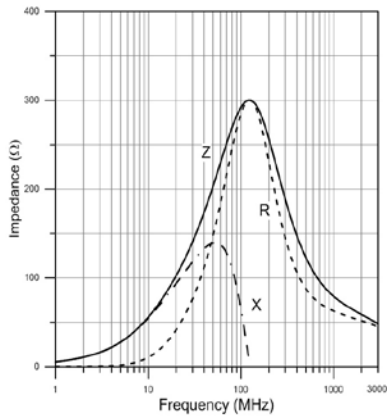
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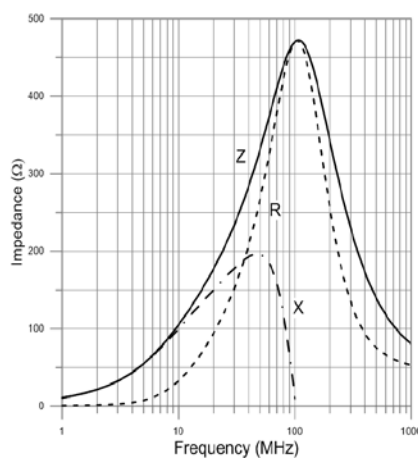
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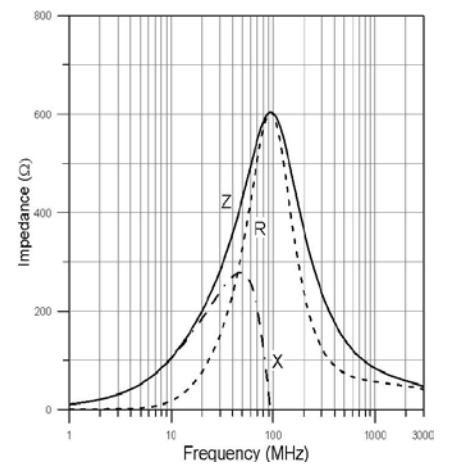
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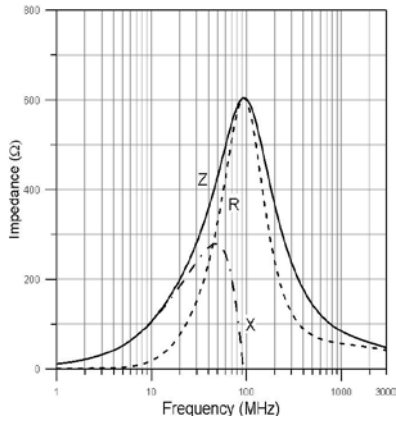
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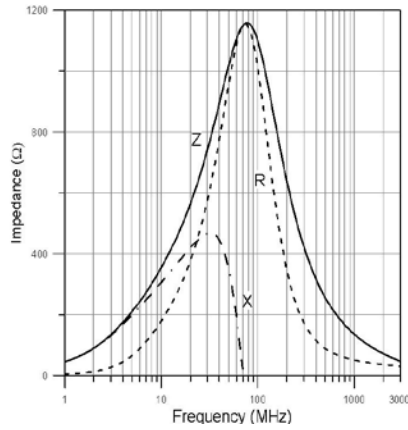
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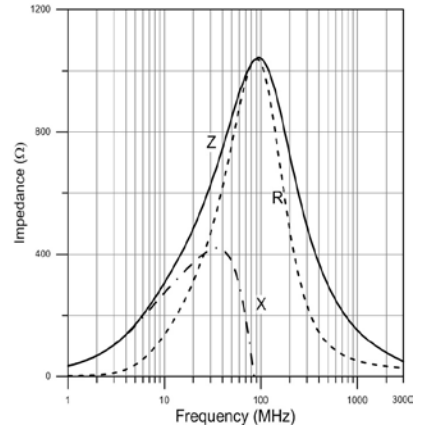
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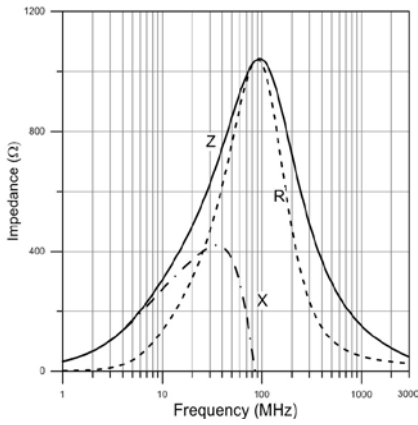
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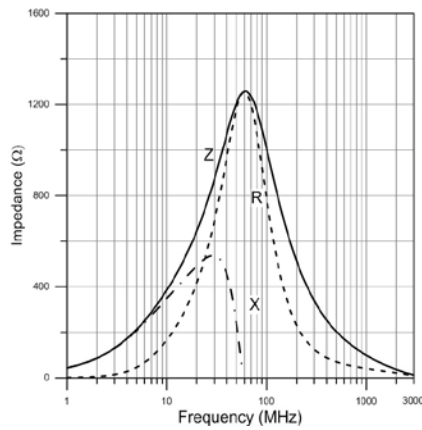
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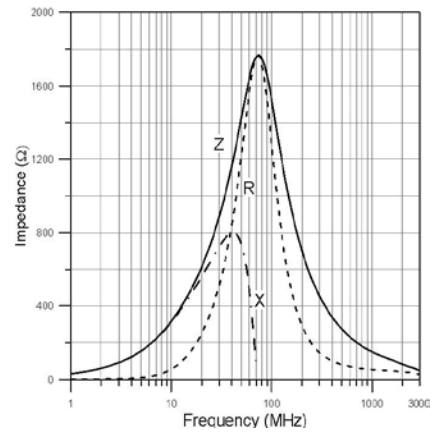
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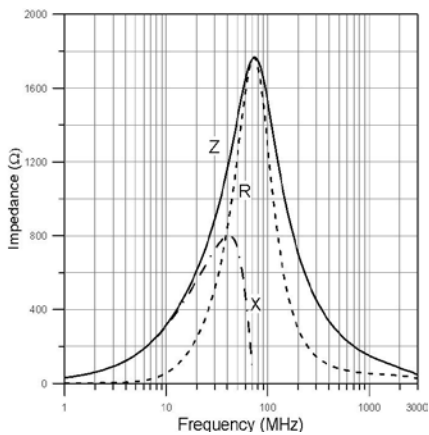
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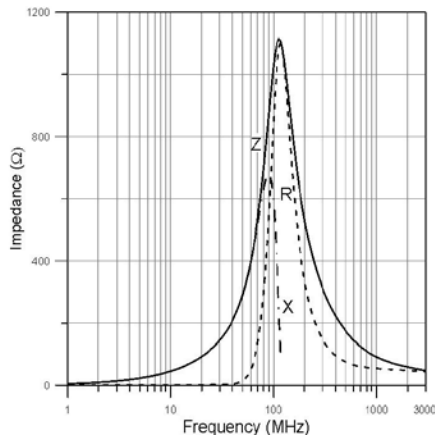
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HABVS32A152 0.5A 50M



HABVS32K102 0.5A



6. Reflow soldering conditions

TYPE : HABVS

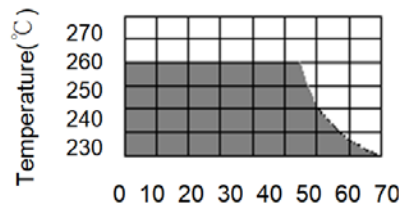
- Pre—heating should be in such a way that the temperature difference between solder and ferrite surface is limited to 150°C max.

Also cooling into solvent after soldering should be in such away that the temperature difference is limited to 100°C max.

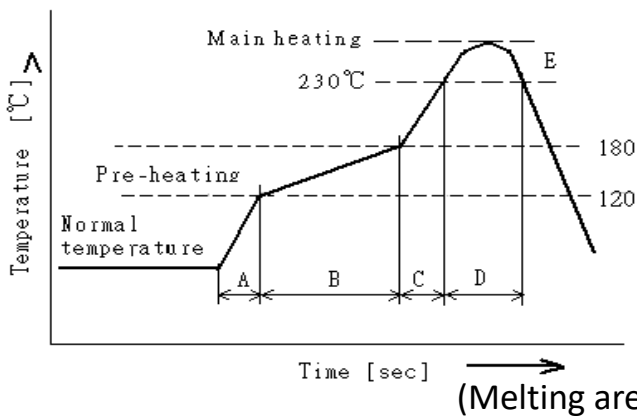
Insufficient pre—heating may cause cracks on the ferrite, resulting in the deterioration of product quality.

- Products should be soldered within the following allowable range indicated by the slanted line.

The excessive soldering conditions may cause the corrosion of the electrode, when soldering is repeated, allowable time is the accumulated time.



◆ Temperature Profile



A	Slope of temp rise	1 to 5	°C/sec
B	Heat time	50 to 150	sec
	Heat temperature	120 to 180	°C
C	Slope of temp rise	1 to 5	°C/sec
D	Time over 230°C	90~120	sec
E	Peak temperature	255~260	°C
	Peak hold time	10 max	sec
No. of mounting		3	times

6-1 Reworking with soldering

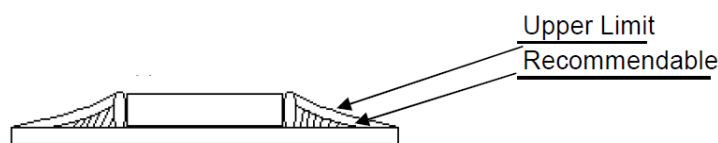
Preheating	150°C, 1 minute
Tip temperature	280°C max.
Soldering time	3 seconds max.
Soldering iron output	30w max.
End of soldering iron	φ 3mm max.

◆ Reworking should be limited to only one time.

Note : Do not directly touch the products with the tip of the soldering iron in order to prevent the crack on the ferrite material due to the thermal shock.

6-2 Solder Volume

Solder shall be used not to be exceed the upper limits as shown below.



Accordingly increasing the solder volume, the mechanical stress to product is also increased. Exceeding solder volume may cause the failure of mechanical or electrical performance.

7. Equipment

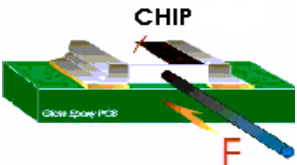
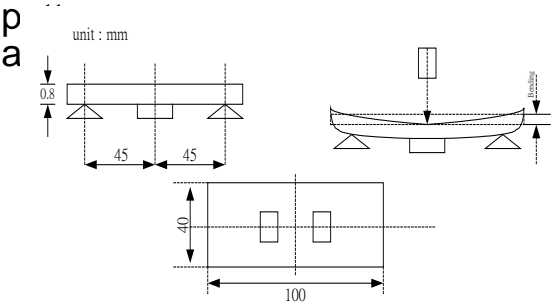
7-1 IMPEDANCE

Impedance shall be measured with HP – 4286A impedance analyzer or equivalent system.

7-2 DC RESISTANCE

DC resistance shall be measured using HP 4338 digital milli – ohm meter with 4 terminal method.

8. Mechanical Characteristics

ITEM	Specification	Test Conditions																											
Terminal Strength	Terminal strength does not distort the case shall meet SPEC DC resistance specifications.	<table border="1"> <thead> <tr> <th>SMD-Size</th> <th>Force g(N)</th> <th>Time Sec.</th> </tr> </thead> <tbody> <tr> <td>1005</td> <td>300g(3N)</td> <td>60+1sec.</td> </tr> <tr> <td>1608</td> <td>500g(5N)</td> <td>60+1sec.</td> </tr> <tr> <td>2012</td> <td>600g(6N)</td> <td>60+1sec.</td> </tr> <tr> <td>3216</td> <td>1000g(10N)</td> <td>60+1sec.</td> </tr> <tr> <td>3225</td> <td>1000g(10N)</td> <td>60+1sec.</td> </tr> <tr> <td>4516</td> <td>1000g(10N)</td> <td>60+1sec.</td> </tr> <tr> <td>4532</td> <td>1500g(15N)</td> <td>60+1sec.</td> </tr> <tr> <td>5650</td> <td>2000g(20N)</td> <td>60+1sec.</td> </tr> </tbody> </table> 	SMD-Size	Force g(N)	Time Sec.	1005	300g(3N)	60+1sec.	1608	500g(5N)	60+1sec.	2012	600g(6N)	60+1sec.	3216	1000g(10N)	60+1sec.	3225	1000g(10N)	60+1sec.	4516	1000g(10N)	60+1sec.	4532	1500g(15N)	60+1sec.	5650	2000g(20N)	60+1sec.
SMD-Size	Force g(N)	Time Sec.																											
1005	300g(3N)	60+1sec.																											
1608	500g(5N)	60+1sec.																											
2012	600g(6N)	60+1sec.																											
3216	1000g(10N)	60+1sec.																											
3225	1000g(10N)	60+1sec.																											
4516	1000g(10N)	60+1sec.																											
4532	1500g(15N)	60+1sec.																											
5650	2000g(20N)	60+1sec.																											
Substrate Bending Test	SPEC substrate bending test DC resistance shall meet specifications $\pm 30\%$.	<p>After soldering a chip to a test substrate, bend the substrate by 2mm hold for 60s and then return. Soldering shall be done in accordance with the recommended PC board</p> 																											
Resistance to Solder Heat	No visible damage Electrical characteristics and mechanical characteristics shall be satisfied. Consult standard MIL-STD-202 METHOD 210	<p>Solder Temp. : $265\pm 3^{\circ}\text{C}$ Immersion time : 6 ± 1 sec Preheating : 100°C to 150°C, 1 minute. Measurement to be made after keeping at room temp for 24 ± 2 hrs. Solder : Sn-3Ag-0.5Cu</p>																											
Solderability	95% min. coverage of all metallized area Consult standard J-STD-002	<p>Solder temp. : $240\pm 5^{\circ}\text{C}$ Immersion time : 3 ± 1 sec</p>																											

9. RELIABILITY AND TEST CONDITIONS

TYPE : HABVS

9-1 HIGH TEMPERATURE RESISTANCE

a. Performance specification

1. Appearance : no mechanical damage
2. Inductance shall be with $\pm 20\%$ of the initial value

b. Test condition

1. Temperature: $125^{\circ}\text{C} \pm 2^{\circ}\text{C}$
2. Testing time : 1000 ± 12 hrs
3. Measurement : After placing at room ambient temperature for 24 hours minimum

9-2 Biased Humidity RESISTANCE

a. Performance specification

1. Appearance : no mechanical damage
2. Inductance shall be with $\pm 20\%$ of the initial value

b. Test condition

1. Humidity: $85 \pm 5\%$ RH
2. Temperature: $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$
3. Testing time: 1000 ± 12 hours
4. Measurement : After placing at room ambient temperature for 24 hours minimum

9-3 TEMPERATURE CYCLE

a. Performance specification

1. Appearance : no mechanical damage
2. Inductance shall be with $\pm 20\%$ of the initial value

b. Test condition

1. Low Temperature: $-55^{\circ}\text{C} \pm 5^{\circ}\text{C}$ kept stabilized for 30 minutes each
2. High Temperature: $125^{\circ}\text{C} \pm 5^{\circ}\text{C}$ kept stabilized for 30 minutes each
3. Cycle : 1000 cycles
4. Measurement : After placing for 24 hours minimum at room ambient temperature
5. step1. -55°C temp $\pm 3^{\circ}\text{C}$ 30 ± 3 minutes
step2. Room temperature 2 to 5 minutes
step3. $+125^{\circ}\text{C}$ temp $\pm 3^{\circ}\text{C}$ 30 ± 3 minutes
step4. room temperature 2 to 5 minutes

9-4 VIBRATION TEST

a. Performance specification

1. Appearance : no mechanical damage
2. Inductance shall be with $\pm 20\%$ of the initial value

b. Test condition

1. Frequency and Amplitude: 10-2000-10 Hz
2. Direction: X, Y, Z.
3. Test duration: 4 hours for each direction, 12 hours in total.

9-5 Mechanical Shock TEST

TYPE : HABVS

a. Performance specification

1. Appearance : no mechanical damage
2. Inductance shall be with $\pm 20\%$ of the initial value

b. Test condition

1. peak acceleration : 100 g's
2. Duration of pulse : 6 ms
3. Waveform : Half-sine
4. Velocity change : 12.3 ft/sec
5. Direction : X , Y , Z (3axes/3 times)

9-6 Operational Life

a. Performance specification

1. Appearance : no mechanical damage
2. Inductance shall be with $\pm 20\%$ of the initial value

b. Test condition

1. Temperature: 125°C $\pm 2^\circ\text{C}$
2. Testing time : 1000 \pm 12hrs
3. Measurement : After placing at room ambient temperature for 24 hours minimum

9-7 Electrostatic discharge test

a. Performance specification

1. Appearance : no mechanical damage
2. Inductance shall be with $\pm 20\%$ of the initial value

b. Test condition

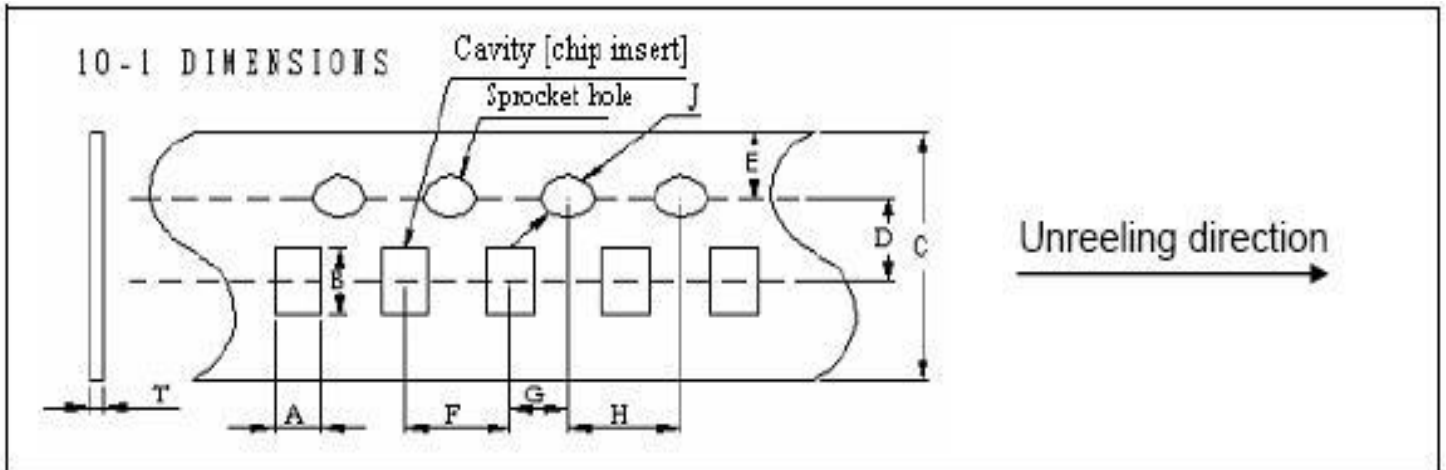
1. ESD voltage: 15k volts
2. Mode 1: 150 pF/330 Ohm
3. Mode 2: 150 pF/2000 Ohm

9.1 REMARK

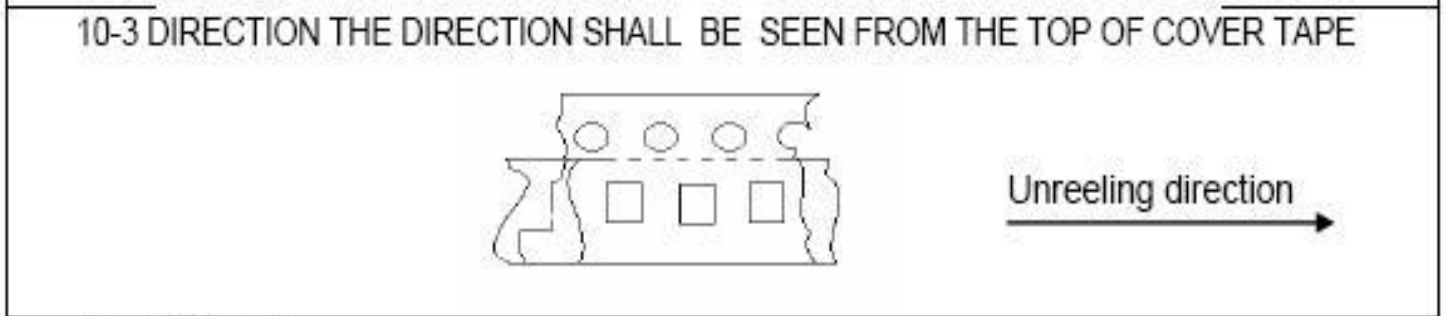
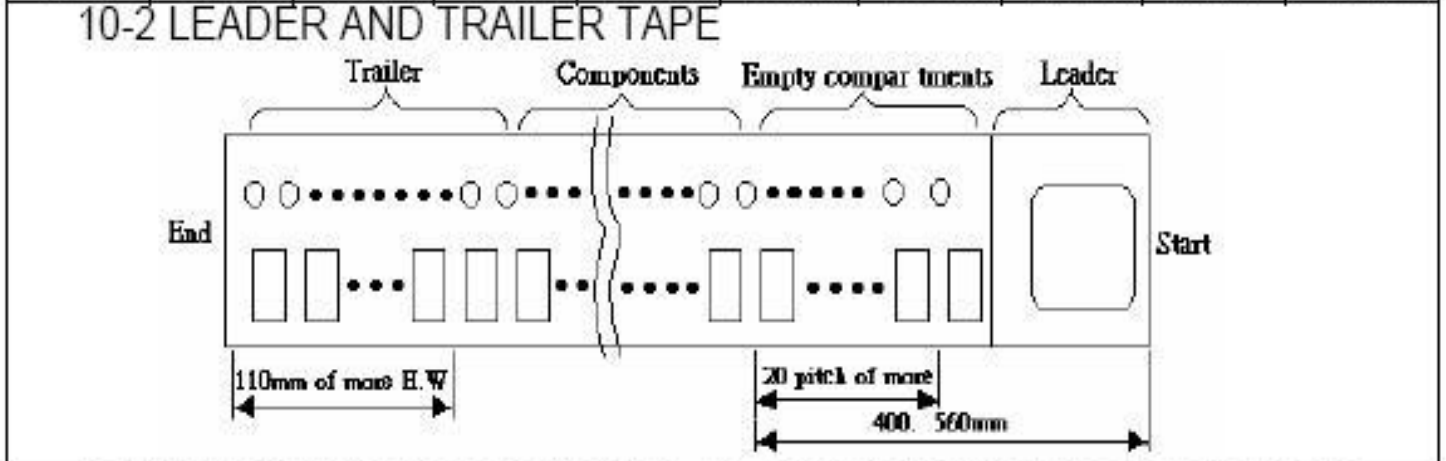
The reliability test customers if there are special requirements in accordance with customer needs.

◆ PAPER CARRIER TYPE PACKING

TYPE : HABVS



A	B	C	D	E	F	G	H	J	T
1.03	1.85	8.00	3.50	1.75	4.00	2.00	4.00	1.55	0.95
±0.05	±0.05	±0.10	±0.05	±0.10	±0.10	±0.05	±0.10	±0.05	±0.05



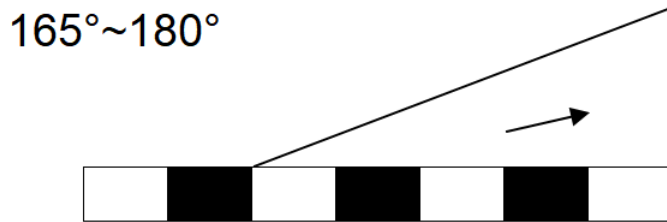
10-4 REELS

UNIT:mm

A	178 ±2.0
N	50 MIN
W1	10 ±1.5
W2	20 MAX

PACKING QTY.
4,000 PCS REEL

Cover tape	(10g~100g)
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◆ Test condition

1. peel angle : 165°~180° vs carrier tape
2. peel speed : 300mm/min

11. Packaging

1. Tape & Reel packaging in composite specification 6/8
2. Reel and a bag of desiccant shall be packed in Nylon or plastic bag
3. Maximum of 5 reels shall be packaged in a inner box
4. Maximum of 6 inner box shall be packaged in a outer box

12. Reel Label

Producing the goods label needs to indicate (1) Pb Free (2) RoHS Compliant

13. Storage

13-1 The solderability of the external electrode may be deteriorated if packages are stored where they are exposed to high humidity. Packages must be stored at 40°C or less and 70% RH or less.

13-2 The solderability of the external electrode may be deteriorated if packages are stored where they are exposed to dust or harmful gas (hydrogen chloride, sulfurous acid gas or hydrogen sulfide).

13-3 Packaging material may be deformed if packages are stored where they are exposed to heat or direct sun-light.

13-4 Minimum packages, such as polyvinyl heat – seal packages shall not be opened until just before they are used. If opened, use the reels as soon as possible.

13-5 Solderability specified in composite specification 4/8 shall be for 12 months from the date of delivery on condition that they are stored at the environment specified clause 13-1 & 13-2. For those parts which passed more than 6 months shall be checked solderability before it is used.

14. Quality System

TYPE : HABVS

- ◆ ISO/IATF16949
- ◆ IECQ QC 080000
- ◆ AEC-Q200 COMPLIANT
- ◆ AUTOMOTIVE QUALITY