

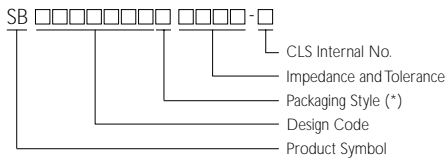
Multilayer Ferrite Chip Beads

SB/PB/NB/GB Series

[SB Series for General Purpose / PB Series for Large Current
NB Series for Data Line, Digital Signals, etc. / GB Series for Medium Current]



PRODUCT IDENTIFICATION



APPLICATIONS

Prevention of high frequency EMI from computers, printers, VCRs, TVs, wireless telephone and other related equipment.

OUTLINE

Chilisin ferrite chip EMI suppressers provide a powerful means of EMI/RFI attenuation for electronic equipment. These products are highly produced with the use of magnetic material and multilayered technology.

These components contain tremendous electrode strength, solder heat resistance and outstanding solderability. These products are specially designed for flow, reflow and wave soldering required for surface mounting application.

FEATURES

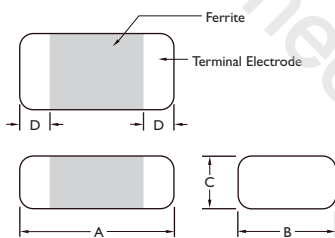
Unlike conventional beads, these beads do not require wiring: Simply mounts them onto the PCB to eliminate the EMI/RFI.

Specially designed for surface mounting equipment, available in various size which allows them to wide range of application and usage.

Best designed and tested to offer high impedance for volume.

SHAPES AND DIMENSIONS

Dimensions : mm



TYPE		A	B	C	D
SB/PB/NB	100505	1.0 ± 0.15	0.50 ± 0.15	0.5 ± 0.15	0.25 ± 0.15
SB/PB/NB/GB	160808	1.6 ± 0.20	0.80 ± 0.15	0.8 ± 0.15	0.4 ± 0.2
SB/PB/NB/GB	201209	2.0 ± 0.20	1.25 ± 0.20	0.9 ± 0.20	0.5 ± 0.3
SB/PB/NB/GB	321611	3.2 ± 0.20	1.60 ± 0.20	1.1 ± 0.20	0.5 ± 0.3
SB/GB	321616	3.2 ± 0.20	1.60 ± 0.20	1.6 ± 0.20	0.5 ± 0.3
SB/GB	322513	3.2 ± 0.20	2.50 ± 0.20	1.3 ± 0.20	0.5 ± 0.3
SB/PB/GB	451616	4.5 ± 0.25	1.60 ± 0.20	1.6 ± 0.20	0.5 ± 0.3
SB/PB/GB	453215	4.5 ± 0.25	3.20 ± 0.20	1.5 ± 0.20	0.5 ± 0.3

ELECTRICAL CHARACTERISTICS SB SERIES

PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.	PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
SBY100505T-060Y-S	6	0.05	500	SBY321611T-190Y-S	19	0.05	600
SBY100505T-100Y-S	10	0.05	500	SBY321611T-260Y-S	26	0.05	600
SBY100505T-400Y-S	40	0.30	300	SBY321611T-320Y-S	32	0.05	600
SBY100505T-800Y-S	80	0.40	200	SBY321611T-500Y-S	50	0.10	500
SBY100505T-121Y-S	120	0.50	200	SBY321611T-600Y-S	60	0.10	500
SBY100505T-241Y-S	240	0.50	200	SBK321611T-700Y-S	70	0.10	500
SBY100505T-481Y-S	480	0.80	100	SBK321611T-900Y-S	90	0.15	500
SBY100505T-601Y-S	600	1.00	100	SBK321611T-121Y-S	120	0.15	500
SBK160808T-110Y-S	11	0.05	500	SBK321611T-151Y-S	150	0.15	500
SBK160808T-190Y-S	19	0.08	500	SBK321611T-201Y-S	200	0.20	400
SBK160808T-300Y-S	30	0.10	400	SBK321611T-401Y-S	400	0.20	400
SBK160808T-400Y-S	40	0.10	400	SBK321611T-501Y-S	500	0.20	400
SBK160808T-600Y-S	60	0.10	300	SBK321611T-601Y-S	600	0.30	400
SBK160808T-800Y-S	80	0.15	300	SBK321611T-102Y-S	1000 *	0.40	200
SBK160808T-121Y-S	120	0.25	300	SBK321611T-122Y-S	1200 *	0.40	200
SBK160808T-221Y-S	220	0.30	200	SBK321611T-152Y-S	1500 *	0.45	200
SBK160808T-301Y-S	300	0.40	200	SBK321611T-202Y-S	2000 **	0.60	200
SBK160808T-451Y-S	450	0.50	200	SBY321616T-250Y-S	25	0.10	500
SBK160808T-601Y-S	600	0.50	200	SBY321616T-600Y-S	60	0.20	500
SBK160808T-751Y-S	750	0.70	200	SBK321616T-700Y-S	70	0.20	500
SBK160808T-102Y-S	1000	0.70	200	SBY322513T-320Y-S	32	0.20	500
SBK160808T-152Y-S	1500	1.00	50	SBY322513T-600Y-S	60	0.20	500
SBK160808T-222Y-S	2200	1.20	50	SBY322513T-900Y-S	90	0.20	500
SBY201209T-070Y-S	7	0.10	600	SBY451616T-500Y-S	50	0.20	600
SBY201209T-090Y-S	9	0.10	600	SBY451616T-600Y-S	60	0.20	600
SBY201209T-110Y-S	11	0.10	600	SBY451616T-800Y-S	80	0.20	600
SBY201209T-170Y-S	17	0.10	600	SBY451616T-101Y-S	100	0.30	500
SBY201209T-320Y-S	32	0.10	600	SBK451616T-151Y-S	150	0.30	500
SBK201209T-600Y-S	60	0.15	500	SBK451616T-171Y-S	170	0.30	500
SBK201209T-700Y-S	70	0.15	500	SBY453215T-700Y-S	70	0.30	500
SBK201209T-800Y-S	80	0.15	500	SBY453215T-121Y-S	120	0.30	500
SBK201209T-121Y-S	120	0.25	300				
SBK201209T-151Y-S	150	0.25	300				
SBK201209T-221Y-S	220	0.30	300				
SBK201209T-301Y-S	300	0.30	300				
SBK201209T-401Y-S	400	0.30	300				
SBK201209T-501Y-S	500	0.40	300				
SBK201209T-601Y-S	600	0.40	300				
SBK201209T-751Y-S	750	0.50	200				
SBK201209T-102Y-S	1000	0.50	200				
SBK201212T-152Y-S	1500	0.60	200				
SBK201209T-202Y-S	2000	0.80	100				
SBK201212T-222Y-S	2200	1.00	100				

NOTE: * at 50MHz ** at 30MHz



ELECTRICAL CHARACTERISTICS PB SERIES

PART NO.	TEST FREQUENCY (MHz)	IMPEDANCE ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
PBY100505T-100Y-S	100	10	0.03	1000
PBY160808T-110Y-S	100	11	0.02	4000
PBY160808T-250Y-S	100	25	0.03	3000
PBY160808T-400Y-S	100	40	0.035	3000
PBY160808T-600Y-S	100	60	0.04	3000
PBY160808T-121Y-S	100	120	0.05	2500
PBY160808T-301Y-S	100	300	0.10	2000
PBY160808T-501Y-S	100	500	0.15	1500
PBY160808T-601Y-S	100	600	0.20	1000
PBY160808T-102Y-S	100	1000	0.25	800
PBY201209T-110Y-S	100	11	0.01	6000
PBY201209T-170Y-S	100	17	0.02	5000
PBY201209T-300Y-S	100	30	0.02	4000
PBY201209T-500Y-S	100	50	0.025	3000
PBY201209T-600Y-S	100	60	0.03	3000
PBY201209T-800Y-S	100	80	0.04	3000
PBY201209T-121Y-S	100	120	0.04	3000
PBY201209T-201Y-S	100	200	0.05	2500
PBY201209T-301Y-S	100	300	0.08	2000
PBY201209T-601Y-S	100	600	0.10	2000
PBY201209T-102Y-S	100	1000	0.12	1500
PBY321611T-190Y-S	100	19	0.015	6000
PBY321611T-320Y-S	100	32	0.015	4000
PBY321611T-500Y-S	100	50	0.02	4000
PBY321611T-800Y-S	100	80	0.025	3000
PBY321611T-101Y-S	100	100	0.03	2500
PBY321611T-301Y-S	100	300	0.06	2000
PBY321611T-601Y-S	100	600	0.10	1800
PBY321611T-102Y-S	50	1000	0.15	1200
PBY321611T-122Y-S	50	1200	0.18	1000
PBY321611T-152Y-S	50	1500	0.20	800
PBY322513T-600Y-S	100	60	0.025	4000
PBY322513T-900Y-S	100	90	0.025	3000
PBY451616T-500Y-S	100	50	0.020	6000
PBY451616T-600Y-S	100	60	0.020	5000
PBY451616T-800Y-S	100	80	0.025	4000
PBY451616T-151Y-S	100	150	0.100	2000
PBY453215T-700Y-S	100	70	0.03	6000
PBY453215T-121Y-S	100	120	0.03	4000

ELECTRICAL CHARACTERISTICS NB SERIES

PART NO.	TEST FREQUENCY (MHz)	IMPEDANCE ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
NBQ100505T-060Y-S	100	6	0.10	300
NBQ100505T-100Y-S	100	10	0.20	200
NBQ100505T-400Y-S	100	40	0.40	150
NBQ100505T-800Y-S	100	80	0.60	100
NBQ100505T-121Y-S	100	120	0.80	50
NBQ160808T-060Y-S	100	6	0.05	500
NBQ160808T-100Y-S	100	10	0.07	400
NBQ160808T-400Y-S	100	40	0.30	300
NBQ160808T-600Y-S	100	60	0.30	300
NBQ160808T-800Y-S	100	80	0.40	300
NBQ160808T-121Y-S	100	120	0.40	300
NBQ160808T-241Y-S	100	240	0.40	200
NBQ160808T-301Y-S	100	300	0.50	200
NBQ160808T-481Y-S	100	480	0.60	150
NBQ160808T-601Y-S	100	600	0.60	100
NBQ160808T-102Y-S	100	1000	0.70	100
NBQ201209T-060Y-S	100	6	0.07	800
NBQ201209T-110Y-S	100	11	0.10	700
NBQ201209T-260Y-S	100	26	0.20	600
NBQ201209T-320Y-S	100	32	0.20	600
NBQ201209T-600Y-S	100	60	0.30	500
NBQ201209T-750Y-S	100	75	0.30	500
NBQ201209T-900Y-S	100	90	0.30	500
NBQ201209T-121Y-S	100	120	0.40	400
NBQ201209T-151Y-S	100	150	0.40	400
NBQ201209T-171Y-S	100	170	0.50	400
NBQ201209T-221Y-S	100	220	0.50	300
NBQ201209T-301Y-S	100	300	0.50	300
NBQ201209T-401Y-S	100	400	0.50	300
NBQ201209T-501Y-S	100	500	0.50	200
NBQ201209T-601Y-S	100	600	0.50	200
NBQ201209T-102Y-S	100	1000	0.60	100
NBQ201209T-122Y-S	100	1200	0.70	100
NBQ201209T-152Y-S	100	1500	0.70	100
NBQ201209T-222Y-S	100	2200	0.75	100
NBQ321611T-320Y-S	100	32	0.20	600
NBQ321611T-600Y-S	100	60	0.30	500
NBQ321611T-800Y-S	100	80	0.30	500
NBQ321611T-900Y-S	100	90	0.30	500
NBQ321611T-121Y-S	100	120	0.40	400
NBQ321611T-151Y-S	100	150	0.40	400
NBQ321611T-201Y-S	100	200	0.50	300
NBQ321611T-221Y-S	100	220	0.50	300
NBQ321611T-351Y-S	100	350	0.60	300
NBQ321611T-401Y-S	100	400	0.60	300
NBQ321611T-601Y-S	100	600	0.80	300
NBQ321611T-122Y-S	100	1200	1.00	200
NBQ321611T-152Y-S	100	1500	1.20	150



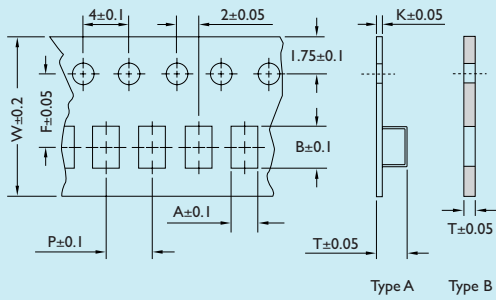
ELECTRICAL CHARACTERISTICS GB SERIES

PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.	PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
GBK160808T-110Y-S	11	0.03	1000	GBY321611T-190Y-S	19	0.03	1000
GBK160808T-190Y-S	19	0.05	1000	GBY321611T-260Y-S	26	0.03	1000
GBK160808T-300Y-S	30	0.06	800	GBY321611T-320Y-S	32	0.03	1000
GBK160808T-400Y-S	40	0.06	800	GBY321611T-500Y-S	50	0.06	800
GBK160808T-600Y-S	60	0.06	600	GBY321611T-600Y-S	60	0.06	800
GBK160808T-800Y-S	80	0.10	600	GBK321611T-700Y-S	70	0.06	800
GBK160808T-121Y-S	120	0.15	600	GBK321611T-900Y-S	90	0.10	800
GBK160808T-221Y-S	220	0.18	400	GBK321611T-121Y-S	120	0.10	800
GBK160808T-301Y-S	300	0.25	400	GBK321611T-151Y-S	150	0.10	800
GBK160808T-451Y-S	450	0.30	400	GBK321611T-201Y-S	200	0.15	600
GBK160808T-601Y-S	600	0.30	400	GBK321611T-401Y-S	400	0.15	600
GBK160808T-751Y-S	750	0.45	300	GBK321611T-501Y-S	500	0.15	600
GBK160808T-102Y-S	1000	0.45	300	GBK321611T-601Y-S	600	0.20	500
GBY201209T-070Y-S	7	0.06	1000	GBK321611T-102Y-S	1000 *	0.25	400
GBY201209T-090Y-S	9	0.06	1000	GBK321611T-122Y-S	1200 *	0.25	400
GBY201209T-110Y-S	11	0.06	1000	GBK321611T-202Y-S	2000 **	0.35	400
GBY201209T-170Y-S	17	0.06	1000	GBY321616T-250Y-S	25	0.10	1000
GBY201209T-320Y-S	32	0.06	1000	GBY321616T-600Y-S	60	0.10	1000
GBK201209T-600Y-S	60	0.10	800	GBK321616T-700Y-S	70	0.10	1000
GBK201209T-700Y-S	70	0.10	800	GBY322513T-320Y-S	32	0.10	1000
GBK201209T-800Y-S	80	0.10	800	GBY322513T-600Y-S	60	0.10	1000
GBK201209T-121Y-S	120	0.15	600	GBY322513T-900Y-S	90	0.10	1000
GBK201209T-151Y-S	150	0.15	600	GBY451616T-500Y-S	50	0.10	1000
GBK201209T-221Y-S	220	0.18	600	GBY451616T-600Y-S	60	0.10	1000
GBK201209T-301Y-S	300	0.18	600	GBY451616T-800Y-S	80	0.10	1000
GBK201209T-401Y-S	400	0.18	600	GBY451616T-101Y-S	100	0.18	800
GBK201209T-501Y-S	500	0.25	500	GBK451616T-151Y-S	150	0.18	800
GBK201209T-601Y-S	600	0.25	500	GBK451616T-171Y-S	170	0.18	800
GBK201209T-751Y-S	750	0.30	400	GBY453215T-700Y-S	70	0.18	800
GBK201209T-102Y-S	1000	0.30	400	GBY453215T-121Y-S	120	0.18	800
GBK201209T-152Y-S	1500	0.40	300				
GBK201209T-202Y-S	2000	0.55	200				

NOTE: * at 50MHz ** at 30MHz

TAPE DIMENSIONS

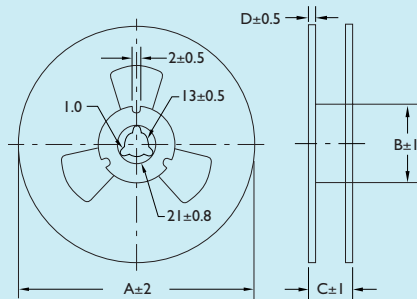
Dimensions : mm



TYPE		A	B	T	W	P	F	K	TAPE TYPE
SB/PB/NB	100505	0.65	1.15	0.7	8.0	2.0	3.5	-	B
SB/PB/NB/GB	160808	0.975	1.8	1.05	8.0	4.0	3.5	-	B
SB/PB/NB/GB	201209	1.54	2.32	1.15	8.0	4.0	3.5	0.2	A
SB/PB/NB/GB	321611	1.94	3.54	1.29	8.0	4.0	3.5	0.2	A
SB/GB	321616	1.94	3.64	1.90	8.0	4.0	3.5	0.2	A
SB/GB	322513	2.80	3.42	1.64	8.0	4.0	3.5	0.2	A
SB/PB/GB	451616	1.94	4.94	1.90	12.0	4.0	5.5	0.3	A
SB/PB/GB	453215	3.64	4.94	1.80	12.0	8.0	5.5	0.3	A

REEL DIMENSIONS

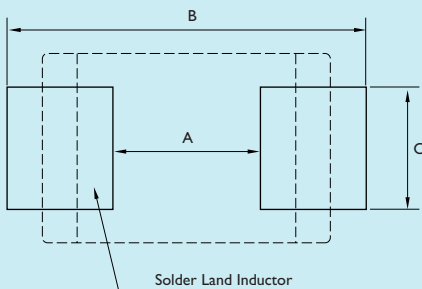
Dimensions : mm



TYPE		A	B	C	D
SB/PB/NB	100505	178	60	10	2
SB/PB/NB/GB	160808	178	60	10	2
SB/PB/NB/GB	201209	178	60	10	2
SB/PB/NB/GB	321611	178	60	10	2
SB/GB	321616	178	60	10	2
SB/GB	322513	178	60	10	2
SB/PB/GB	451616	178	60	14	2
SB/PB/GB	453215	178	60	14	2

RECOMMENDED PATTERN

Dimensions : mm



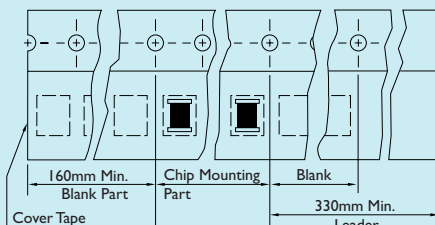
TYPE		A	B	C
SB/PB/NB	100505	0.4	1.2 ~ 1.4	0.4
SB/PB/NB/GB	160808	0.8	2.4 ~ 3.4	0.6
SB/PB/NB/GB	201209	1.2	3.0 ~ 4.0	1.0
SB/PB/NB/GB	321611	2.0	4.2 ~ 5.2	1.2
SB/GB	321616	2.0	4.2 ~ 5.2	1.2
SB/GB	322513	2.0	5.5 ~ 6.5	1.8
SB/PB/GB	451616	3.0	5.5 ~ 6.5	1.2
SB/PB/GB	453215	3.0	5.5 ~ 6.5	2.4

TAPE MATERIAL

Carrier Tape : Polystyrene (for 201209, 201211, 321611, etc.)

Paper (for 160808, 100505)

Cover Type : Polyethyeniene



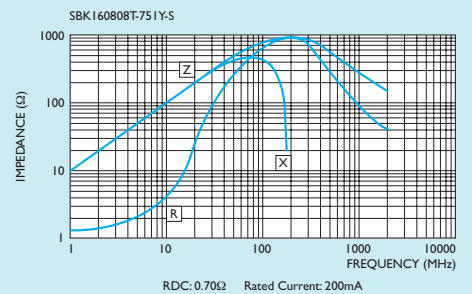
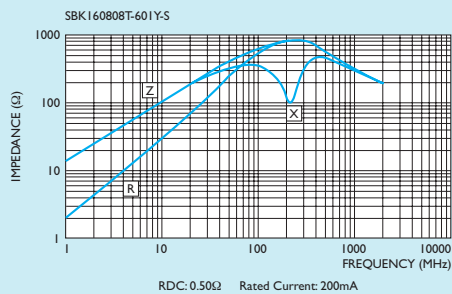
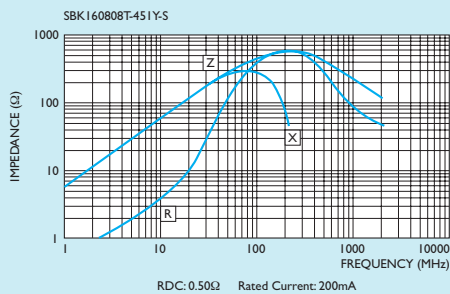
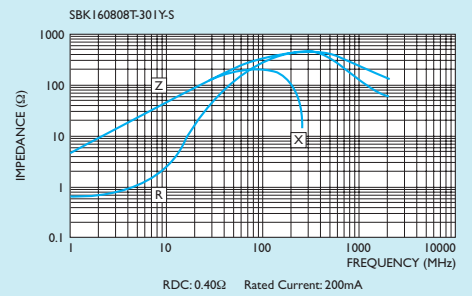
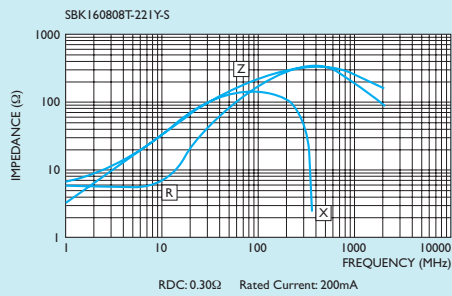
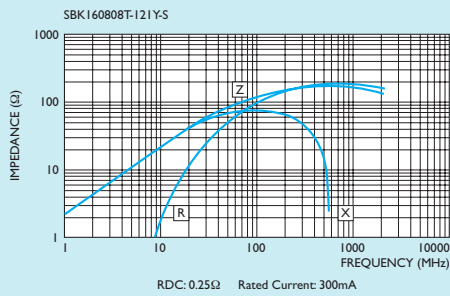
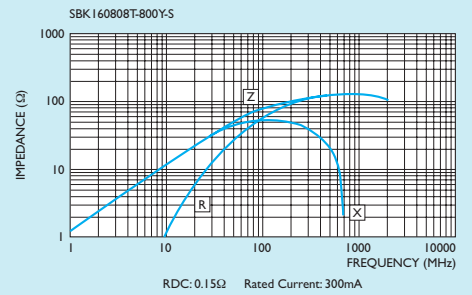
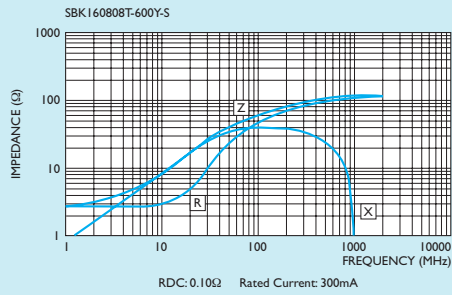
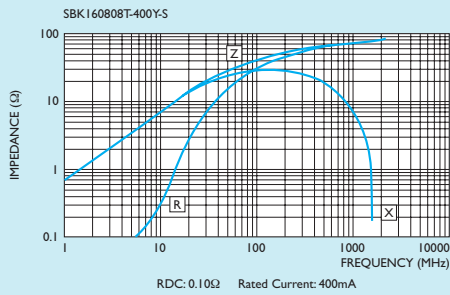
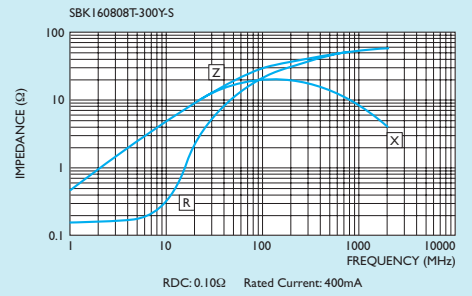
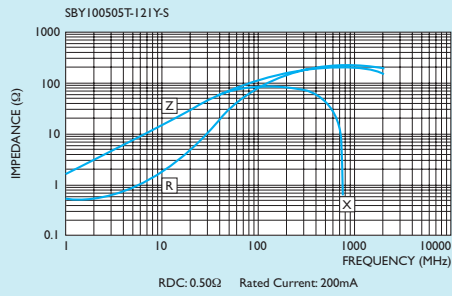
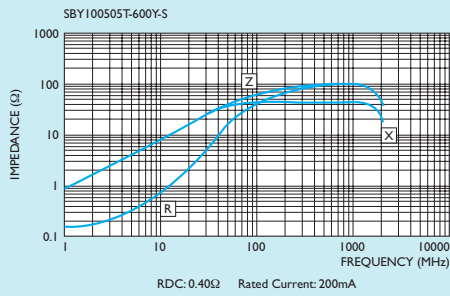
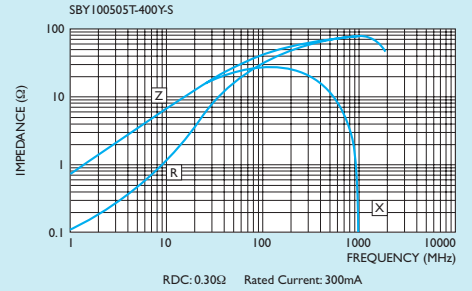
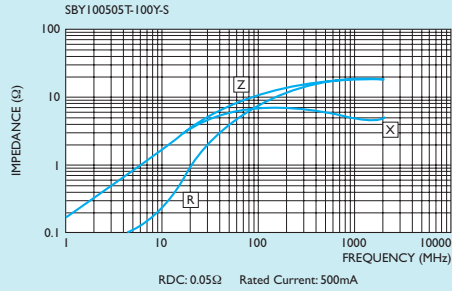
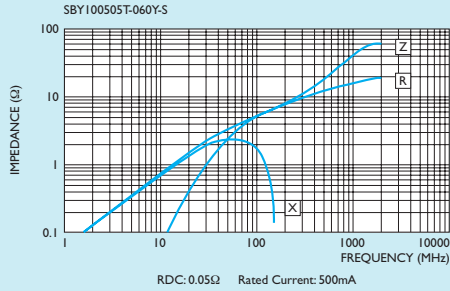
PACKAGING QUANTITY

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SB/PB/NB/GB	160808	√	4000
SB/PB/NB/GB	201209	√	4000
SB/PB/NB/GB	321611	√	3000
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SB/PB/GB	451616	√	2000
SB/PB/GB	453215	√	1000



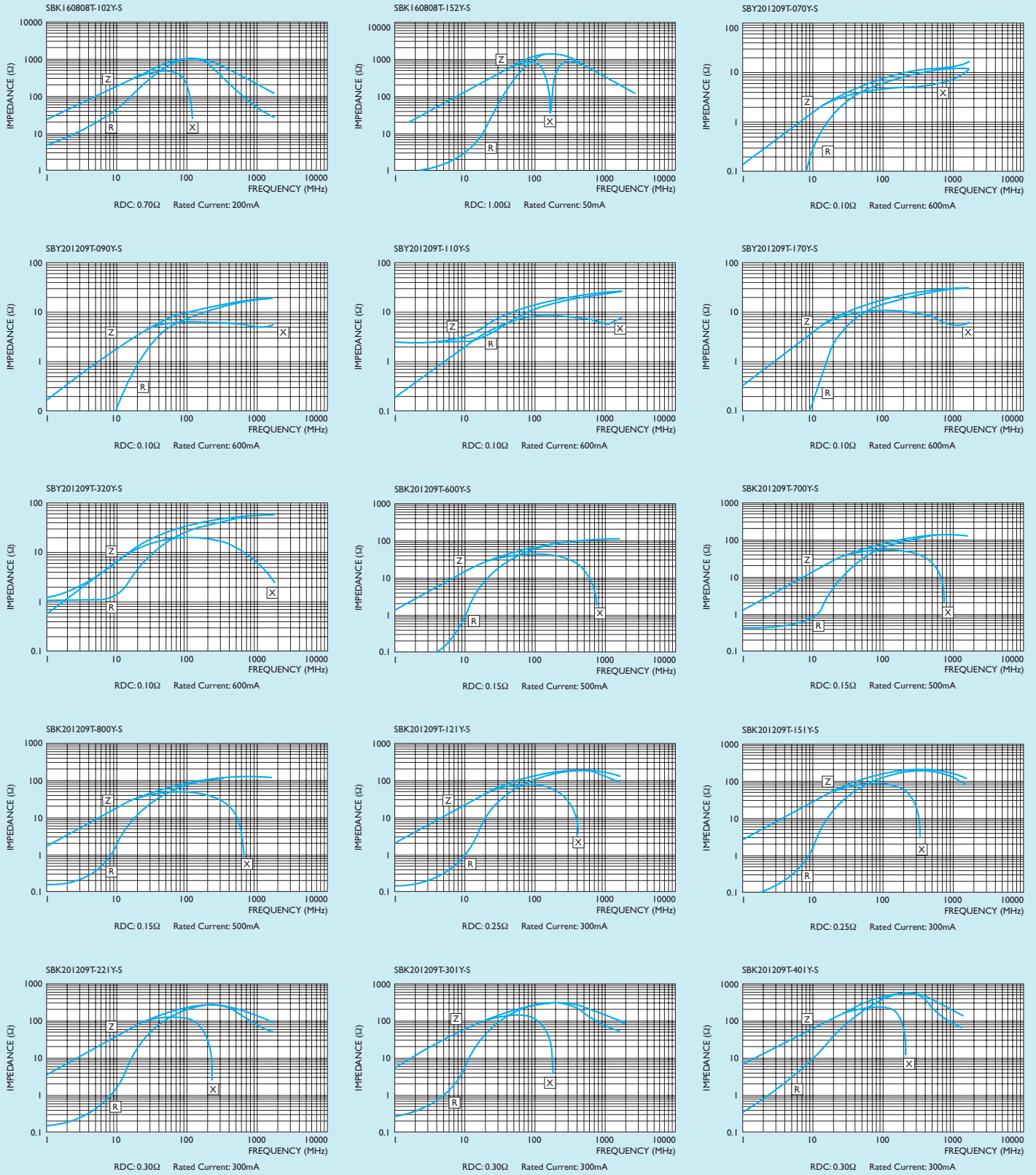
TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance / Material Analyzer



TYPICAL ELECTRICAL CHARACTERISTICS

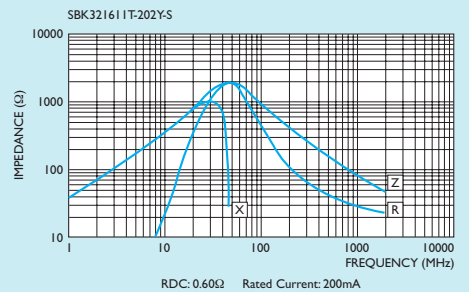
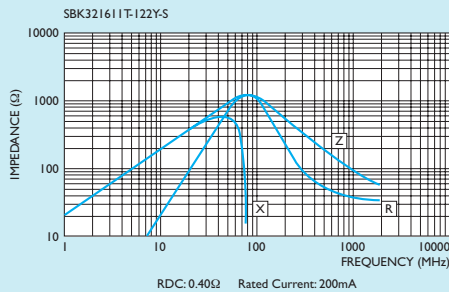
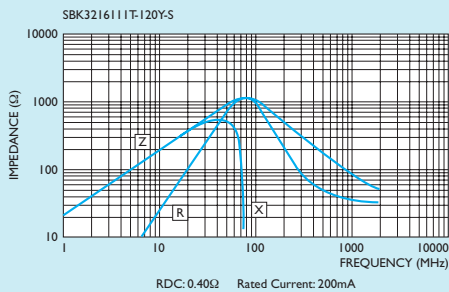
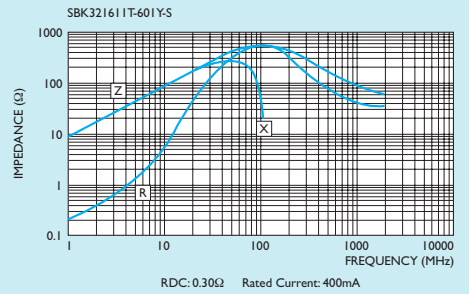
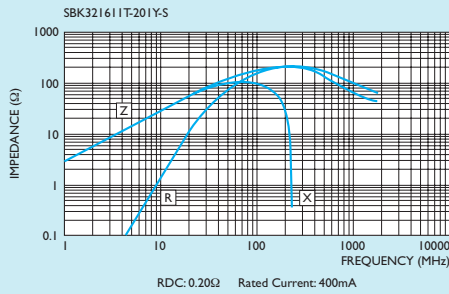
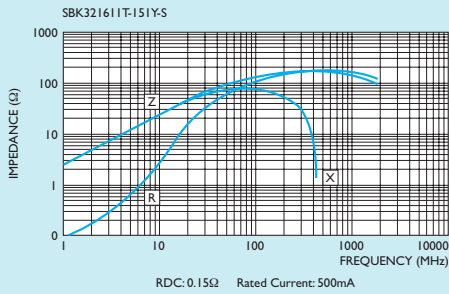
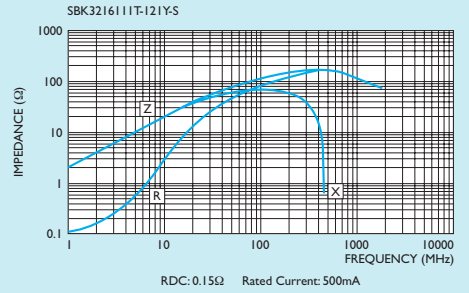
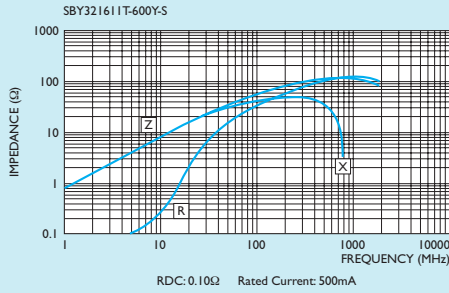
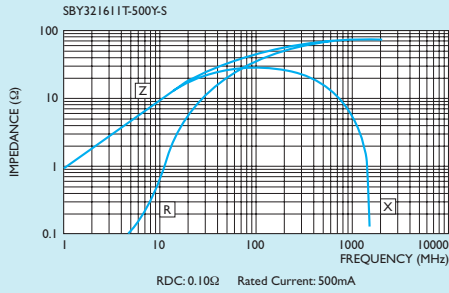
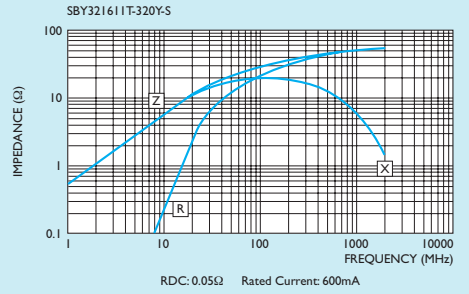
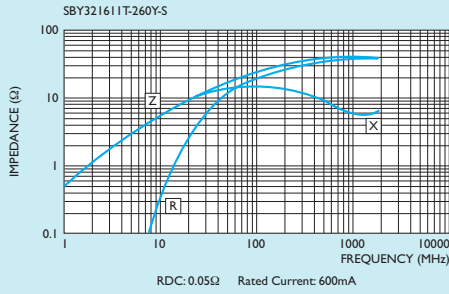
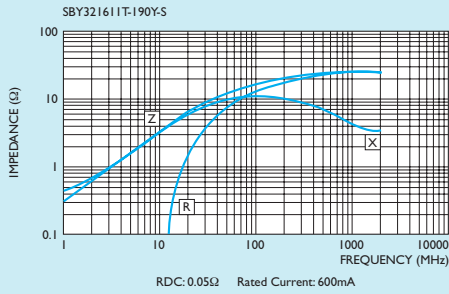
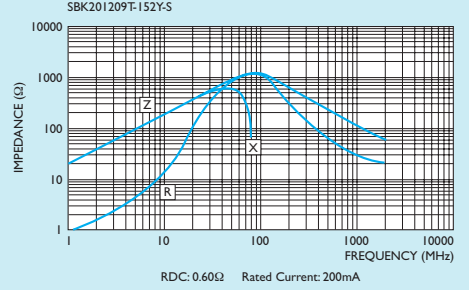
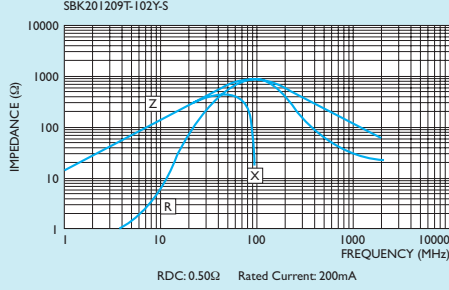
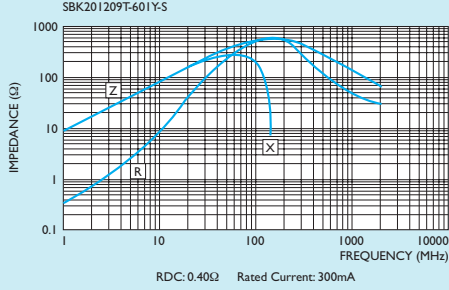
Test Instruments : HP4291A Impedance / Material Analyzer





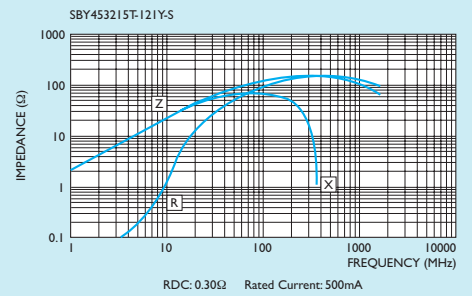
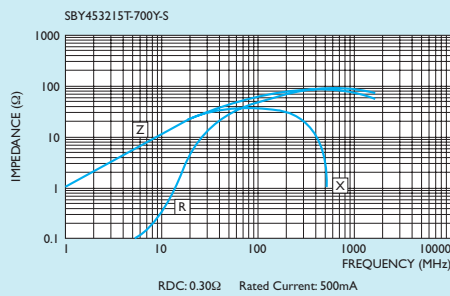
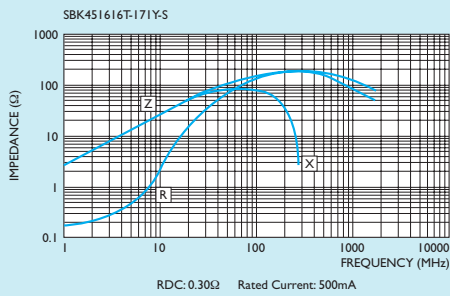
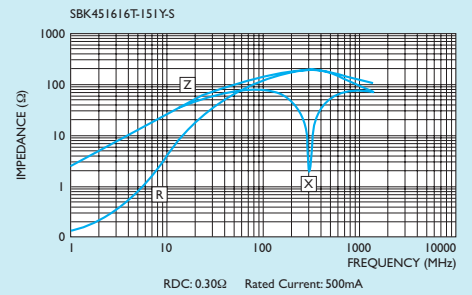
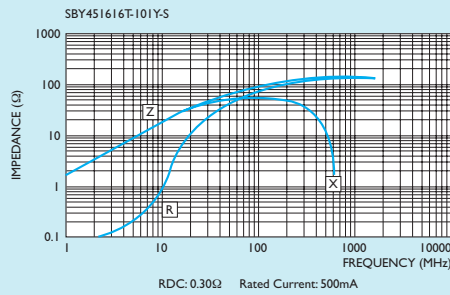
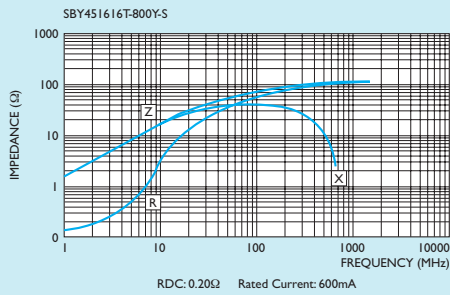
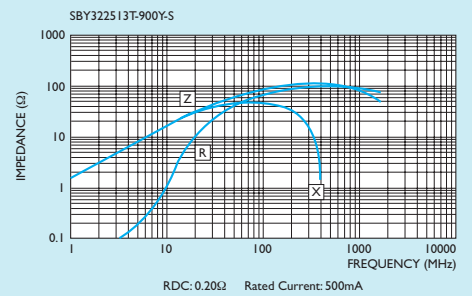
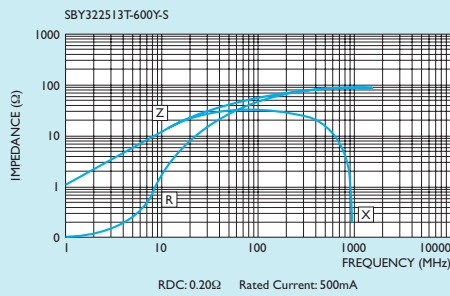
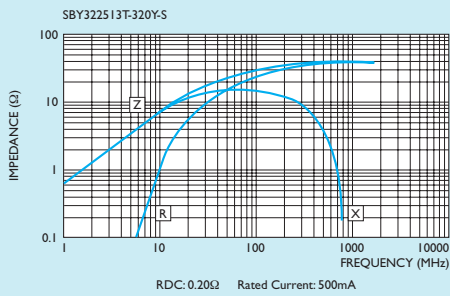
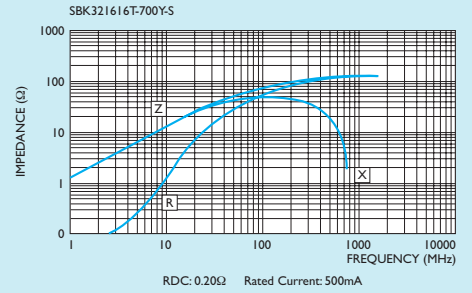
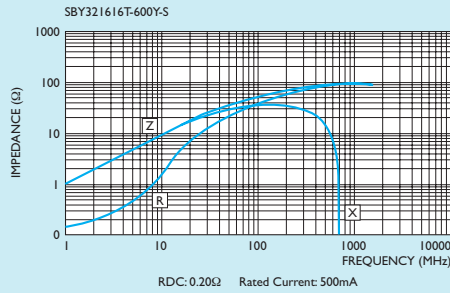
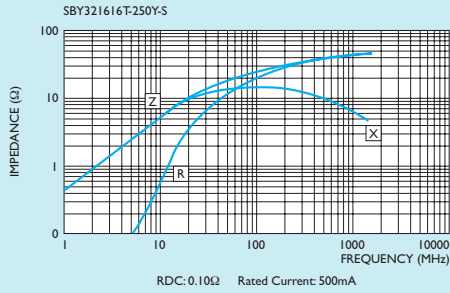
TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance / Material Analyzer



TYPICAL ELECTRICAL CHARACTERISTICS

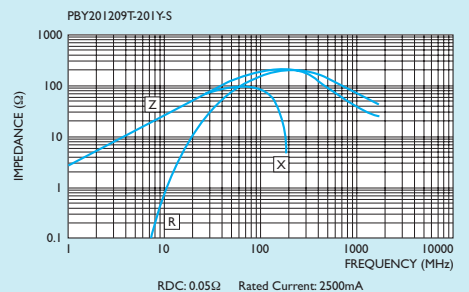
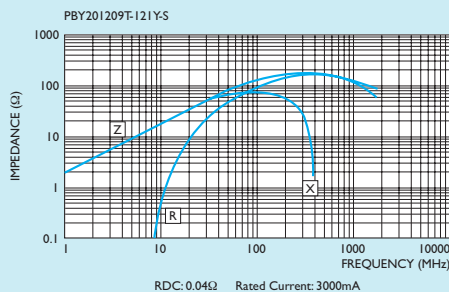
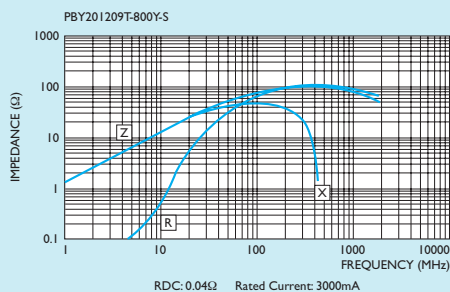
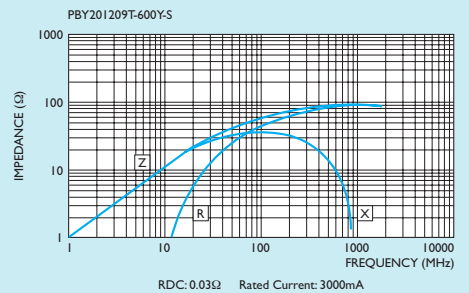
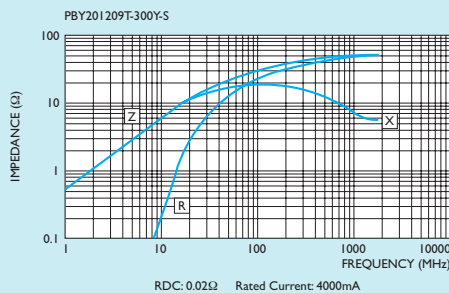
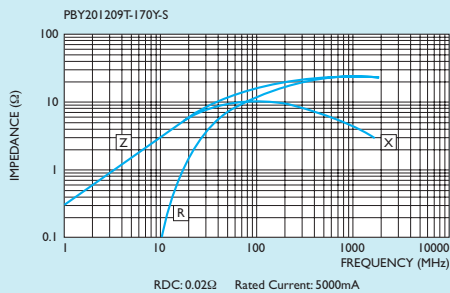
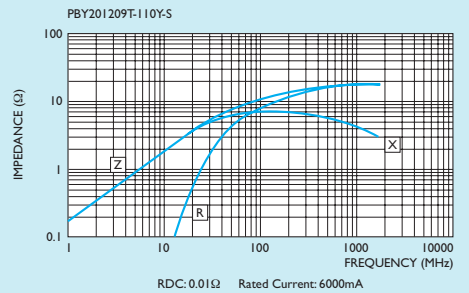
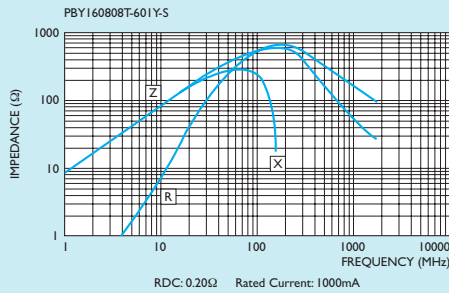
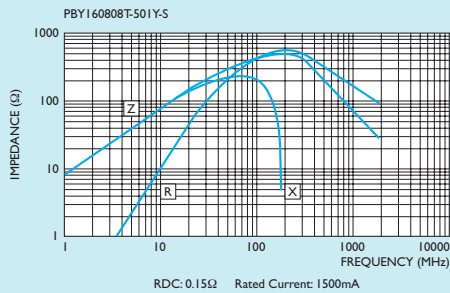
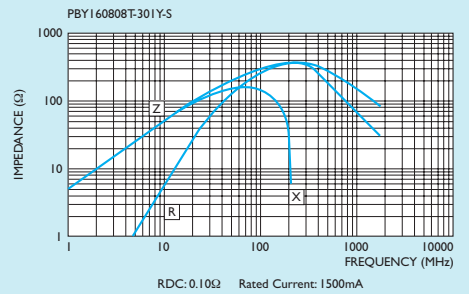
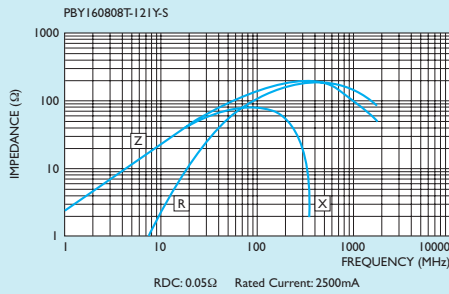
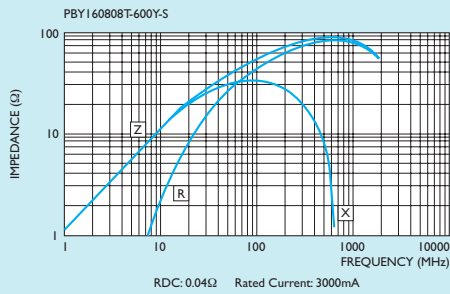
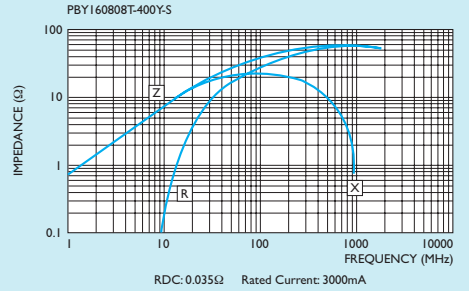
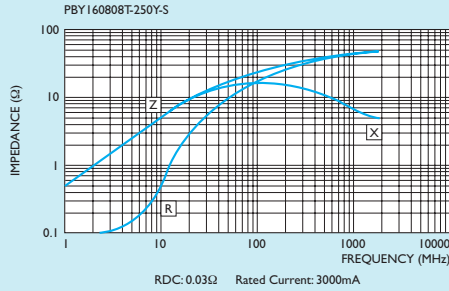
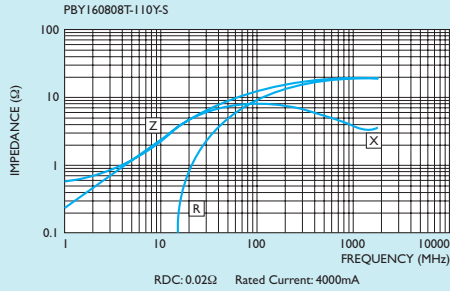
Test Instruments : HP4291A Impedance / Material Analyzer





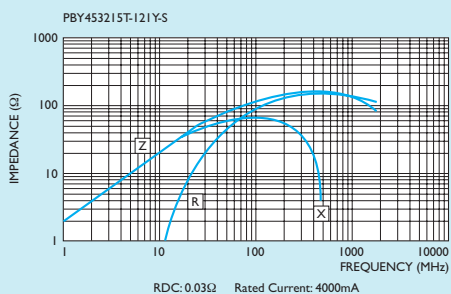
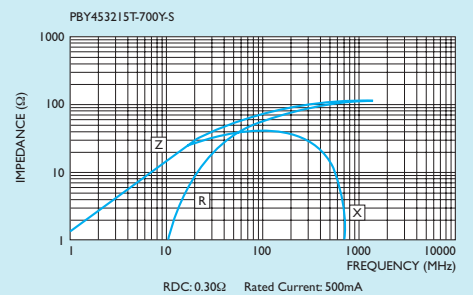
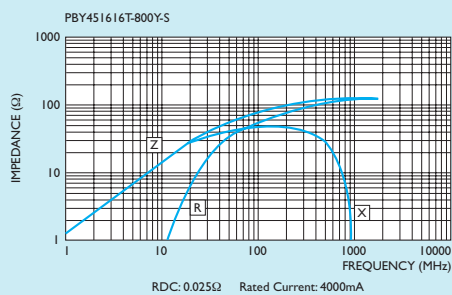
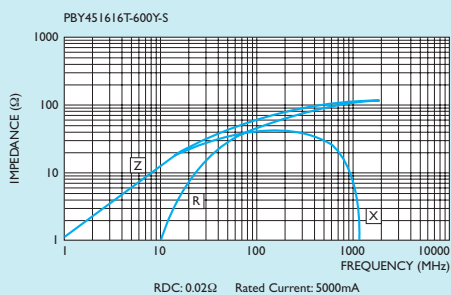
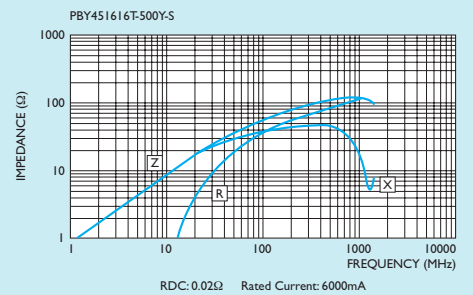
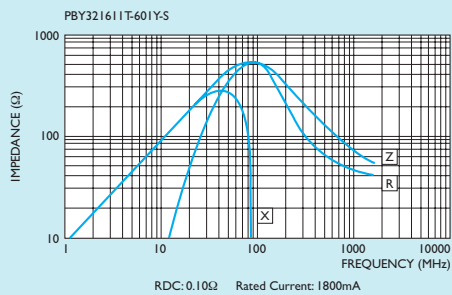
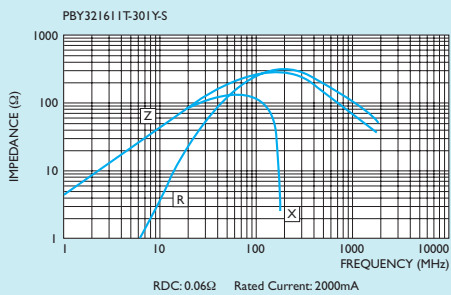
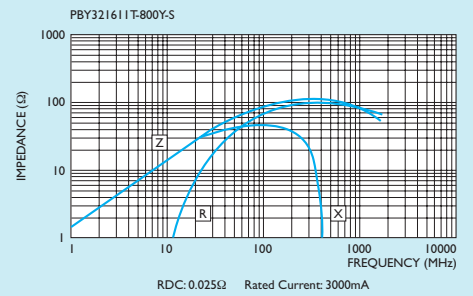
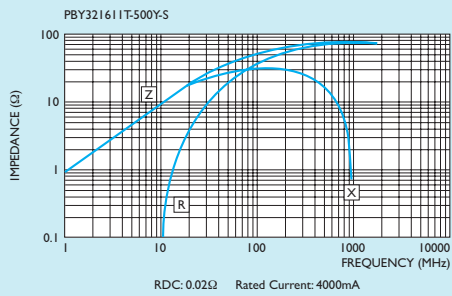
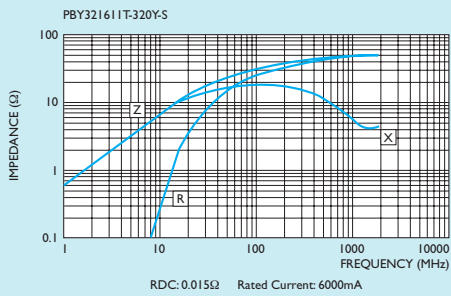
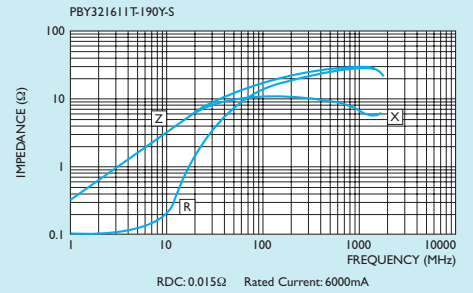
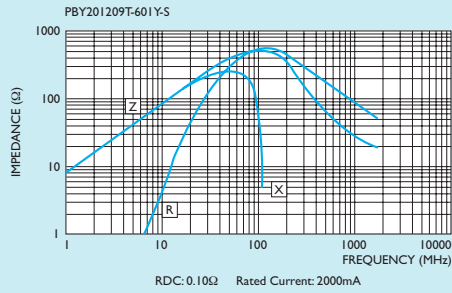
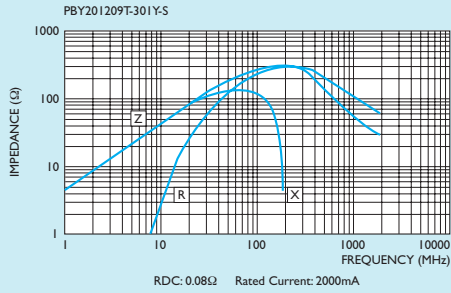
TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance / Material Analyzer



TYPICAL ELECTRICAL CHARACTERISTICS

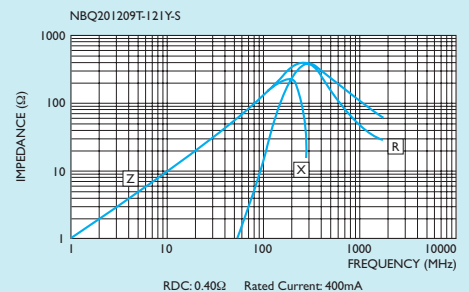
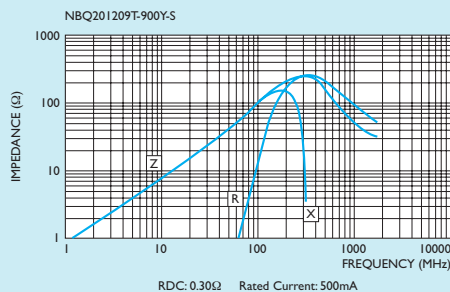
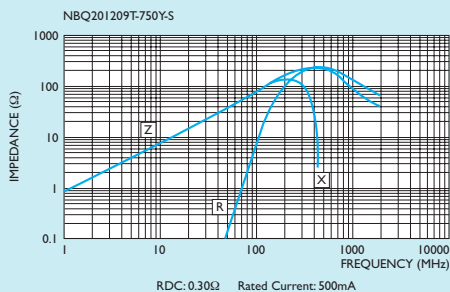
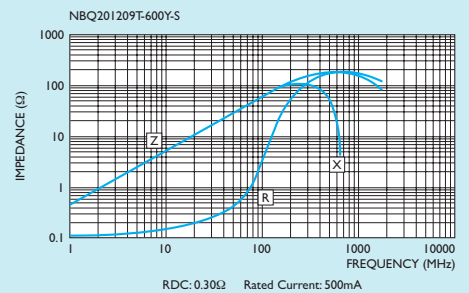
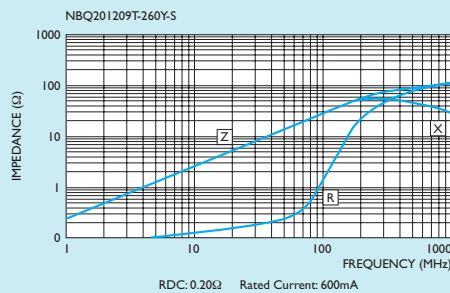
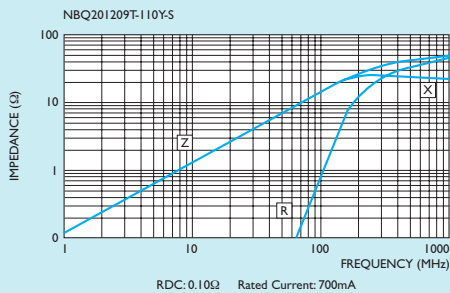
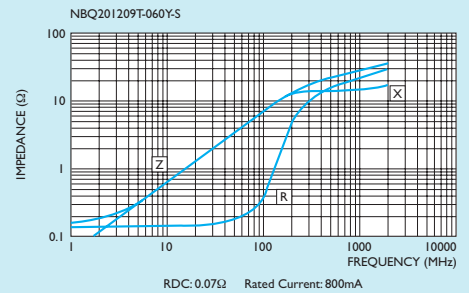
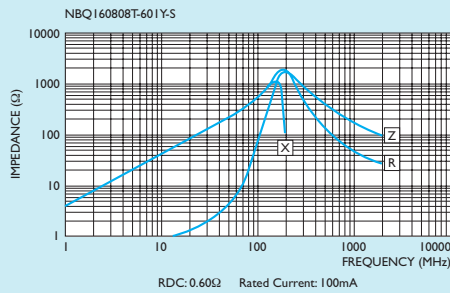
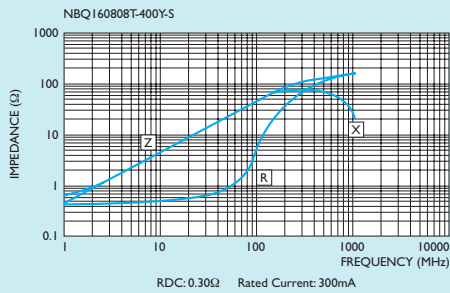
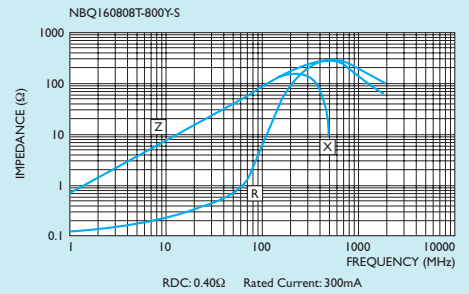
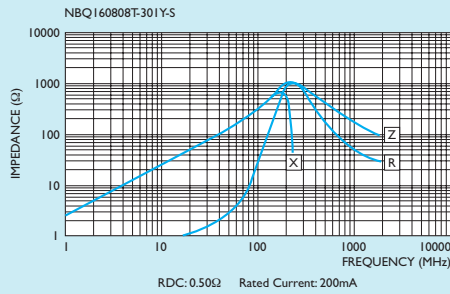
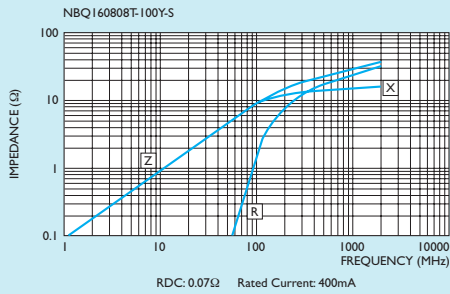
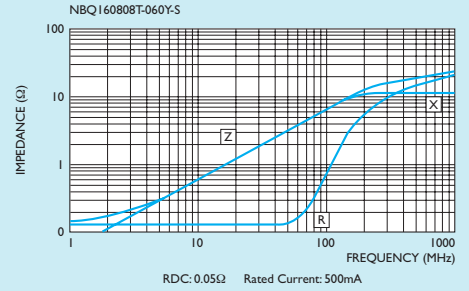
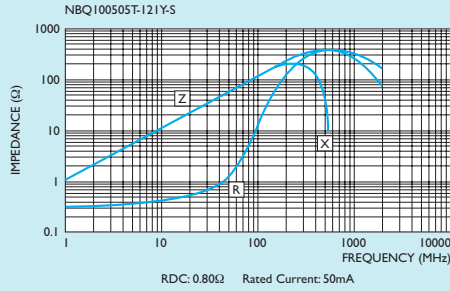
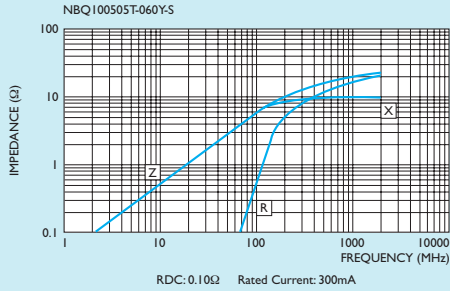
Test Instruments : HP4291A Impedance / Material Analyzer





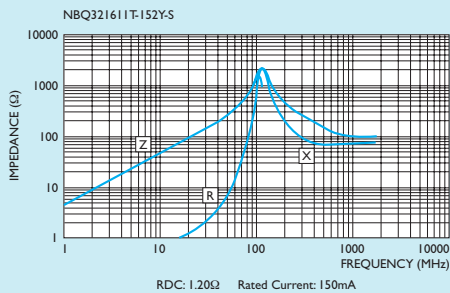
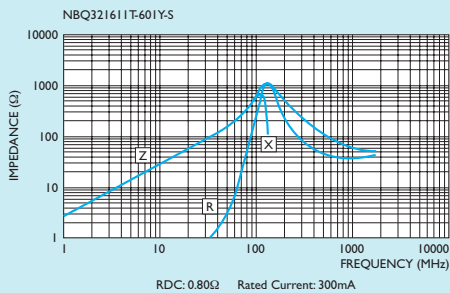
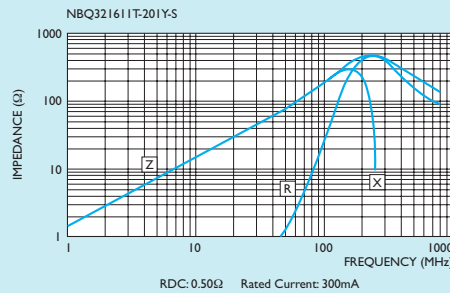
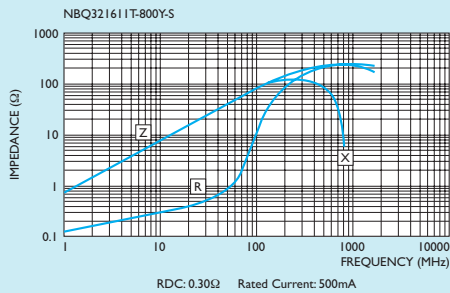
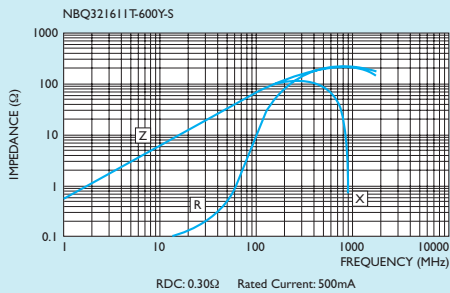
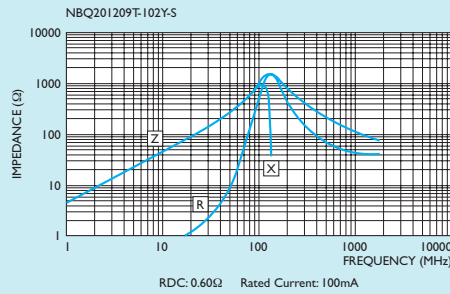
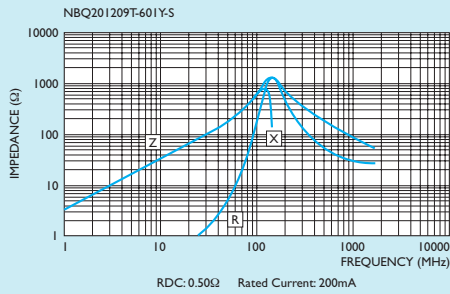
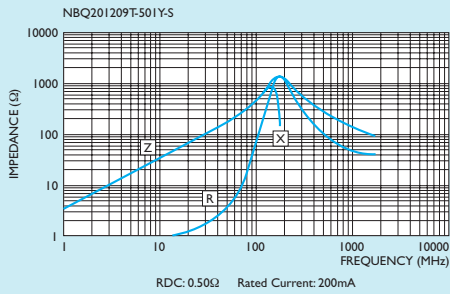
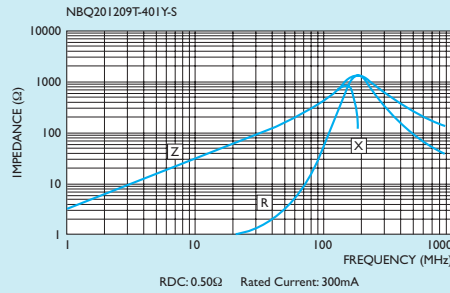
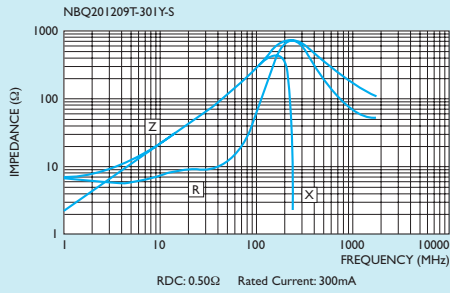
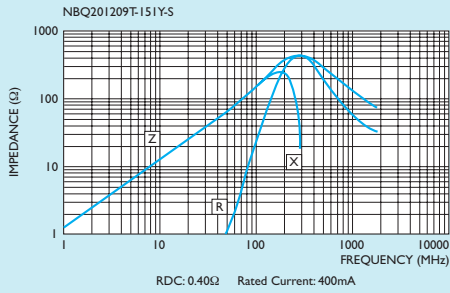
TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance / Material Analyzer



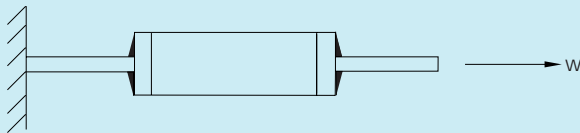
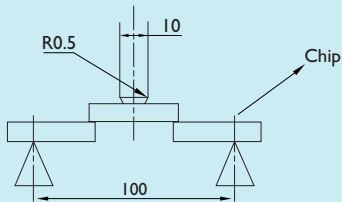
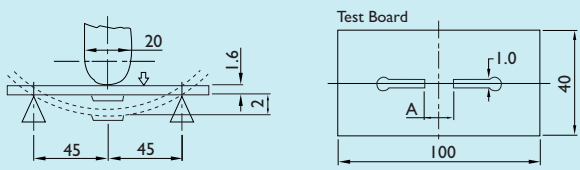
TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance / Material Analyzer





SB, PB, CL SERIES RELIABILITY TEST

NO.	ITEM	TEST CONDITIONS	REMARKS																
1	Thermal Shock (Temperature Cycle)	Temperature : -40°C, +85°C, Kept Stabilized For 30 Minutes Each Cycle : 100 Cycles	Inductance value shall be within $\pm 10\%$ of the initial value. Q-factor shall be within $\pm 30\%$ of the initial value. Impedance shall be within $\pm 20\%$ of the initial value.																
2	Humidity Resistance	Humidity : 90% to 95% RH Temperature : $40 \pm 2^\circ\text{C}$ Testing Time : 1000 ± 12 Hours	DCR value shall be within $\pm 20\%$ of the initial value. • No. 1-4 Measurement : After placing for 24 hours min. • No. 2-3 Applied current : Rated Current (Maximum Value)																
3	High Temperature Resistance	Temperature : $85 \pm 2^\circ\text{C}$ Humidity : 20% Testing Time : 1000 ± 12 Hours	• No. 5 Cycle : 5 Cycles																
4	Low Temperature Resistance	Temperature : $-40 \pm 2^\circ\text{C}$ Time : 1000 ± 12 Hours																	
5	Temperature and Humidity Cycle	<table border="1"> <thead> <tr> <th>Step</th> <th>Temperature</th> <th>Humidity</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>$25 \pm 2^\circ\text{C}$</td> <td>95 ~ 100% RH</td> <td>3 Hours</td> </tr> <tr> <td>2</td> <td>$55 \pm 2^\circ\text{C}$</td> <td>95 ~ 96% RH</td> <td>9.5 Hours</td> </tr> <tr> <td>3</td> <td>$25 \pm 2^\circ\text{C}$</td> <td>95 ~ 100% RH</td> <td>11.5 Hours</td> </tr> </tbody> </table>	Step	Temperature	Humidity	Time	1	$25 \pm 2^\circ\text{C}$	95 ~ 100% RH	3 Hours	2	$55 \pm 2^\circ\text{C}$	95 ~ 96% RH	9.5 Hours	3	$25 \pm 2^\circ\text{C}$	95 ~ 100% RH	11.5 Hours	
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6	Vibration	Frequency : 10 Hz to 55 Hz Amplitude : 1.5 mm Direction : X, Y, Z Time : 2 Hours Each																	
7	Solderability	Solder : H63A (Eutectic Solder) Solder Temperature : $230 \pm 5^\circ\text{C}$ Time : 3 ± 1 Second Flux : Rosin	More than 90% of the terminal electrode will be covered with solder.																
8	Soldering Heat Resistance	Solder : H63A (Eutectic Solder) Solder Temperature : $260 \pm 5^\circ\text{C}$ Flux : Rosin Dip Time : 10 ± 1 Seconds	The chip must have no cracks. More than 75% of the terminal electrode must be covered with solder.																
9	Terminal Strength		The terminal electrode and the ferrite must not be damaged by the forces applied on the test conditions. Spec : 100505 Series : ≥ 0.2 Kg 160808 Series : ≥ 0.5 Kg 201209 Series : ≥ 1.0 Kg Other Series : ≥ 2.0 Kg																
10	Bending Strength		The terminal electrode and the ferrite must not be damaged by the forces applied on the test conditions. Spec : 453215, 451616 : ≥ 8 Kg 321616, 321611, 322513 : ≥ 6 Kg 201209, 160808 : ≥ 3 Kg 100505 : ≥ 1 Kg																
11	Flexure Strength		No mechanical damage shall be noticed even when the board is bent 2 mm.																