

# MULTILAYER CHIP BEAD ARRAY

## - FBA SERIES -



### FEATURES

- Monolithic inorganic material construction
- Closed magnetic circuit avoids crosstalk
- Excellent solderability and heat resistance

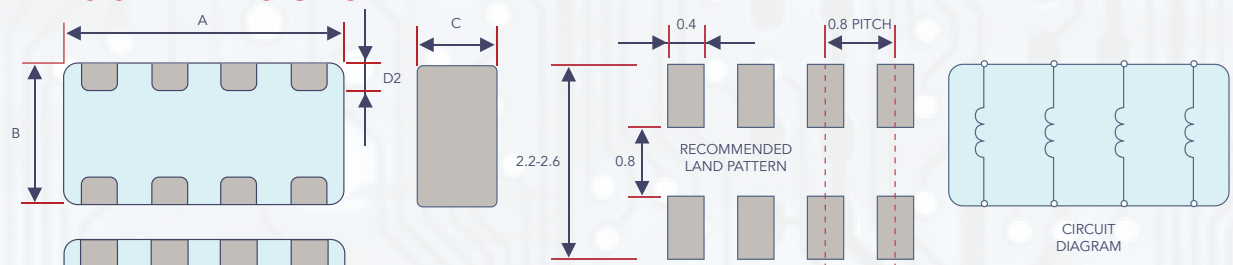
### APPLICATIONS

- Noise elimination for four I/O lines of notebook PCs, digital TVs and VTRs, printers, hard disk drivers, personal computers and other general consumer and computer products

### GENERAL TECHNICAL DATA

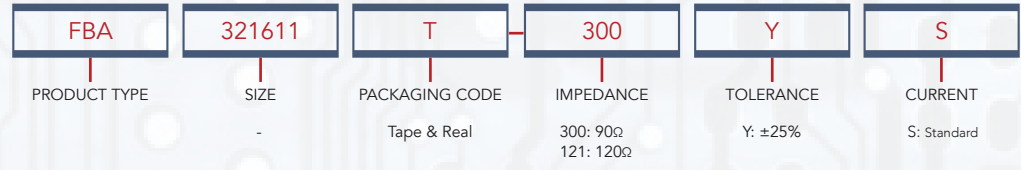
OPERATING TEMPERATURE RANGE -40°C ~ + 125°C  
 (Including self - temperature rise)  
 STORAGE TEMPERATURE 40°C MAX., 70% RHMAX.  
 Store this product under the condition of 5°C to 40°C, 20% to 70%RH and use within 6 months

### SHAPES & DIMENSIONS

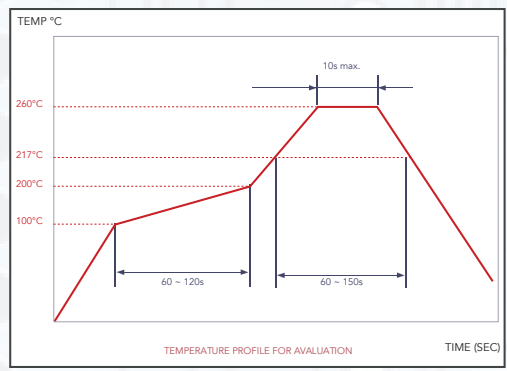


TYPE	AC	B	C	D1	D2	P
FBA321611	3.20±0.20	1.60±0.20	0.90 ± 0.20	0.40 ± 0.15	0.20 ± 0.10	0.80 ± 0.10

### SHAPES & DIMENSIONS



### RECOMMENDED LAND PATTERN



### ELECTRICAL CHARACTERISTICS

PART NUMBER	IMPEDANCE (Ω)	TEST FREQUENCY	MAX OF DC RESISTANCE	RATED CURRENT
FBA321611T-300Y-S	30Ω ± 25%	100MHz	0.20Ω	500 mA
FBA321611T-600Y-S	60Ω ± 25%	100MHz	0.25Ω	400 mA
FBA321611T-121Y-S	120Ω ± 25%	100MHz	0.30Ω	350 mA
FBA321611T-301Y-S	300Ω ± 25%	100MHz	0.40Ω	250 mA
FBA321611T-601Y-S	600Ω ± 25%	100MHz	0.50Ω	200 mA
FBA321611T-102Y-S	1000Ω ± 25%	100MHz	0.75Ω	150 mA

### PACKAGE QUANTITY

- Standard quantity for Packaging: 3,000 pcs/reel



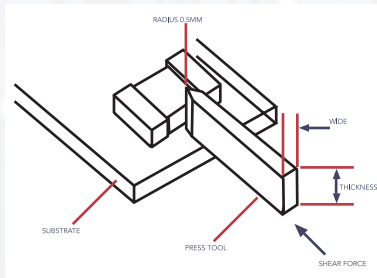
## RELIABILITY AND TEST CONDITION

ITEM	PERFORMANCE	TEST CONDITION															
OPERATING TEMPERATURE	-55 ~ +125°C (Including self-temperature rise)	-															
TRANSPORTATION STORAGE TEMPERATURE	-55 ~ +125°C (on board)	For long storage conditions, please see the application notice															
IMPEDANCE (Z)	Refer to standard electrical characteristics list	Agilent4291 Agilent E4991 Agilent4287 Agilent16192															
DC RESISTANCE		Agilent 4338															
RATED CURRENT		DC Power Supply Over Rated Current requirements, there will be some risk															
TEMPERATURE RISE TEST	Rated Current < 1A ΔT 20°C Max Rated Current ≥ 1A ΔT 40°C Max	1. Applied the allowed DC current 2. Temperature measured by digital surface thermometer.															
LIFE TEST	Appearance: no damage. Impedance: within ±15% of initial value DCR: within ±15% of initial value and shall not exceed the specification value	Preconditioning: Run through reflow for 3 times. (IPC/JEDEC J-STD-020F Classification Reflow Profiles) Temperature: 125 ± 2°C Applied current: rated current. Duration: 1000 ± 12hrs. Measured at room temperature after placing for 24 ± 2 hrs.															
LOAD HUMIDITY		Preconditioning: Run through reflow for 3 times. (IPC/JEDEC J-STD-020-F Classification Reflow Profiles) Humidity: 85 ± 3% R.H. Temperature: 85 ± 2°C Duration: 1000hrs Min. Bead: with 100% rated current Inductance: with 10% rated current Measured at room temperature after placing for 24 ± 2 hrs.															
THERMAL SHOCK	Appearance: no damage. Impedance: within ±15% of initial value and shall not exceed the specification value	Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STDSTD-020 F Classification Reflow Profiles) Condition for 1 cycle Step 1: -55 ± 2°C 30 ± 5 min Step 2: 125 ± 2°C ≤0.5 min Step 3: 125 ± 2°C 30 ± 5 min Number of cycles: 500 Measured at room temperature after placing for 24 ± 2 hrs.															
VIBRATION	Appearance: No damage Impedance: within ±15% in initial value DCR: within ±15% of initial value and shall not exceed the specification value	Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STDSTD-020 F Classification Reflow Profiles) Oscillation Frequency: 10Hz ~ 2KHz ~ 10Hz for 20 minutes Equipment: Vibration checker Total Amplitude: 10g Testing Time: 12 hours (20 minutes, 12 cycles each of 3 orientations)															
BENDING	Appearance: No damage Impedance: within ±10% of initial value DCR: within ±15% of initial value and shall not exceed the specification value	Shall be mounted on a FR4 substrate of the following dimensions: >=0805 inch (2012mm): 40x100x1.2mm <0805 inch (2012mm): 40x100x0.8mm Bending Depth: >=0805 inch (2012mm): 1.2mm <0805 inch (2012mm): 0.8mm Duration of 10 sec for a min.															
SHOCK	Appearance: No damage. Impedance: within ±10% of initial value DCR: within ±15% of initial value and shall not exceed the specification value	Test Condition <table border="1"> <thead> <tr> <th>TYPE</th> <th>PEAK VALUE (G'S)</th> <th>NORMAL DURATION (D) (MS)</th> <th>WAVE FORM</th> <th>VELOCITY CHANGE (V) FT/SEC</th> </tr> </thead> <tbody> <tr> <td>SMD</td> <td>50</td> <td>11</td> <td>half-sine</td> <td>11.3</td> </tr> <tr> <td>Lead</td> <td>50</td> <td>11</td> <td>half-sine</td> <td>11.3</td> </tr> </tbody> </table>	TYPE	PEAK VALUE (G'S)	NORMAL DURATION (D) (MS)	WAVE FORM	VELOCITY CHANGE (V) FT/SEC	SMD	50	11	half-sine	11.3	Lead	50	11	half-sine	11.3
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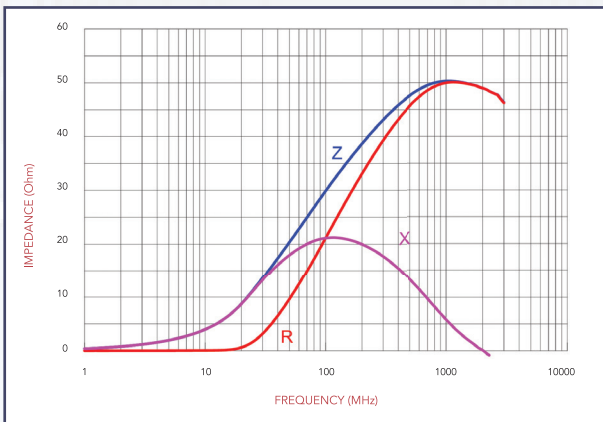
## RELIABILITY AND TEST CONDITION

ITEM	PERFORMANCE	TEST CONDITION						
SOLDERABILITY	More than 95% of the terminal electrode should be covered with solder.	a. Method B, 4 hrs @155°C dry heat @ 235°C ± 5C Test Time: 5 +0 / -0.5 seconds b. Method D category 3. (steam aging 8 hours ± 15 min) @ 260°C ± 5°C Test Time: 30 +0 / -0.5 seconds						
RESISTANCE TO SOLDERING HEAT	Appearance: no damage Impedance: within ± 15% of initial value DCR: within ±15% of initial value and shall not exceed the specification value	Number of heat cycles: 1  <table border="1"> <thead> <tr> <th>TEMPERATURE</th> <th>TIME (S)</th> <th>TEMPERATURE RAMP / IMMERSION AND EMERSION RATE</th> </tr> </thead> <tbody> <tr> <td>260 ± 5 (solder temp)</td> <td>10 ± 1</td> <td>25 mm / s ± 6mm/s</td> </tr> </tbody> </table>	TEMPERATURE	TIME (S)	TEMPERATURE RAMP / IMMERSION AND EMERSION RATE	260 ± 5 (solder temp)	10 ± 1	25 mm / s ± 6mm/s
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TERMINAL STRENGTH	Appearance: no damage Impedance: within ±15% of initial value DCR: within ±15% of initial value and shall not exceed the specification value.	Preconditioning: Run through reflow for 3 times. (IPC/JEDEC J-STD020F Classification Reflow Profiles) Component Mounted on a PCB supply a force >0805 inch (2012mm): 1kg <=0805 inch (2012mm): 0.5kg to the side of a device being tested. This force shall be applied for 60 + 1 seconds. Also the force shall be applied gradually as not to shock the component being tested.						

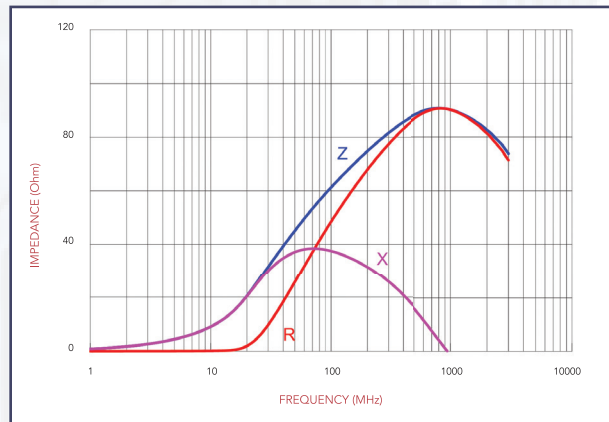


## IMPEDANCE FREQUENCY CHARACTERISTICS

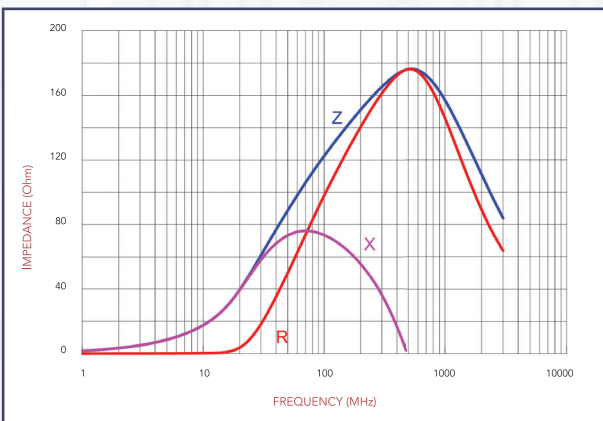
- FBA321611T-300Y-S



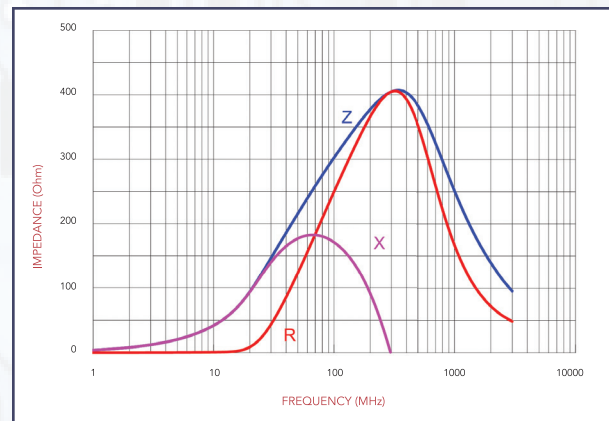
- FBA321611T-600Y-S



- FBA321611T-121Y-S



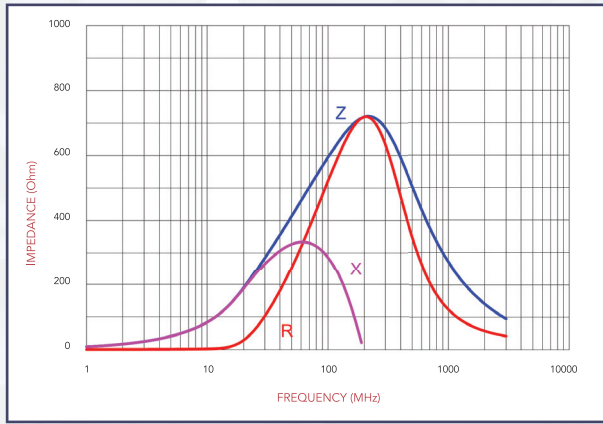
- FBA321611T-301Y-S





# IMPEDANCE FREQUENCY CHARACTERISTICS

- FBA321611T-601Y-S



- FBA321611T-102Y-S

