Specification For Approval

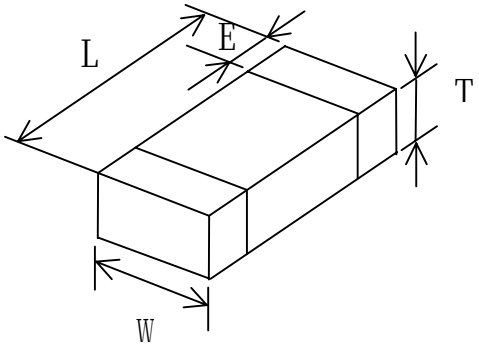
AXIS POWER 經軸電子

Multilayer chip bead 1608 (0603) series

PRODUCT DETAIL

Electrical Characteristics			Test Instruments
Z	Ω (Ref. Page 2)	TEST FREQ: 100 MHz TEST LEVEL: 250 mV	•HP4291B RF IMPEDANCE / MATERIAL ANALYZER •HP4338A/B MILLIOHMMETER •Agilent 8720ES S-PARAMETER NETWORK ANALYZER •HP6632B SYSTEM DC POWER SUPPLY
θ	NA		
SRF	NA		
DCR	Ω (Ref. Page 2)		
IDC	mA (Ref. Page 2)		

SHAPES AND DIMENSIONS



Unit : mm

TYPE	160808
L	1.6±0.15
W	0.8±0.15
T	0.8±0.15
E	0.3±0.20

Specification For Approval

AXIS POWER 經軸電子

Multilayer chip bead 1608 (0603) series

▪PART NUMBER AND CHARACTERISTICS TABLE

BCCB-1608E1 Series

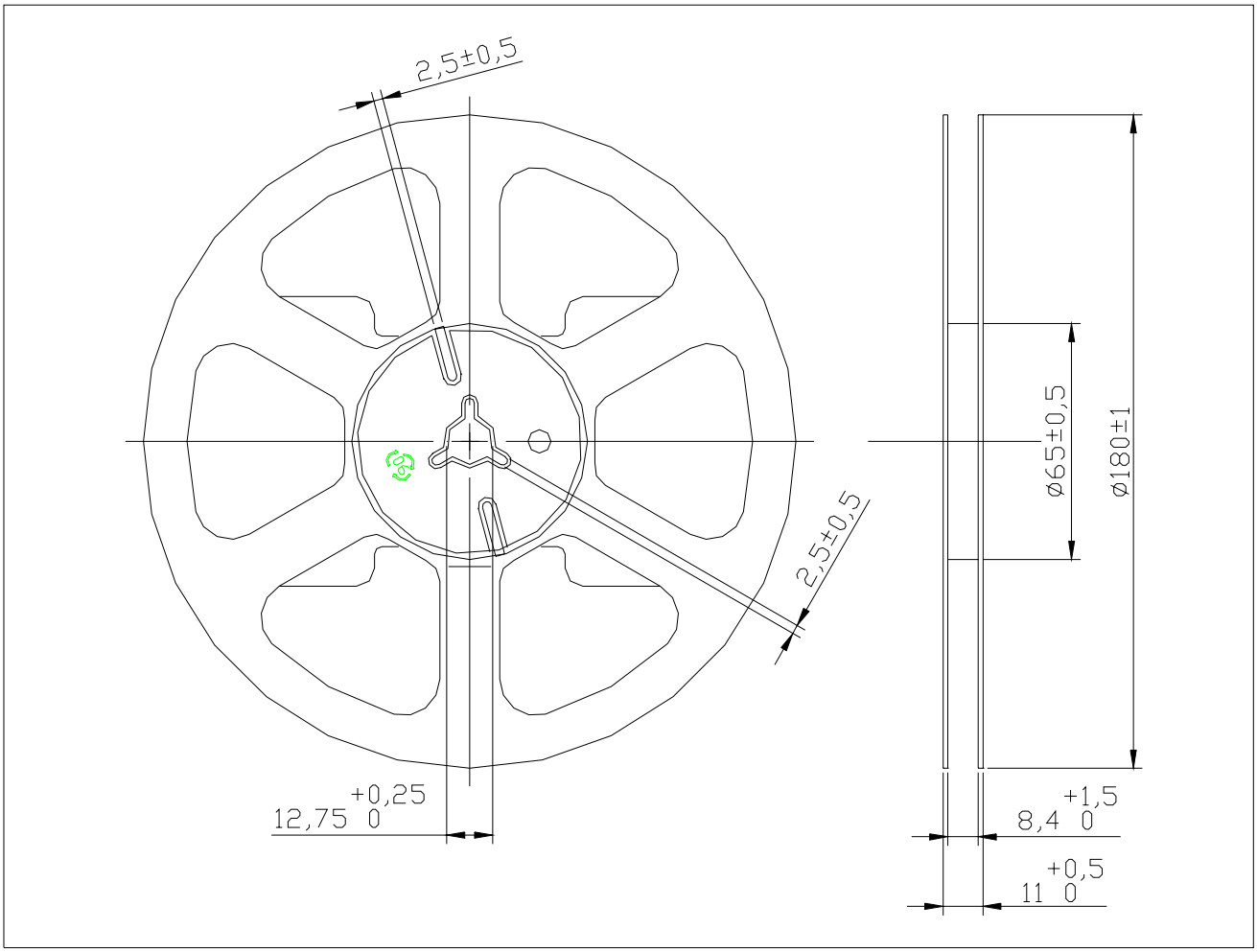
Part No.	Impedance(Ω) +/-25%	Test Freq.(MHz)	DCR(Ω) (Max.)	Rated Current (mA)
BCCB-1608E1-100T	10	100	0.05	600
BCCB-1608E1-300T	30	100	0.20	400
BCCB-1608E1-470T	47	100	0.20	300
BCCB-1608E1-600T	60	100	0.20	300
BCCB-1608E1-800T	80	100	0.20	300
BCCB-1608E1-101T	100	100	0.20	200
BCCB-1608E1-121T	120	100	0.20	200
BCCB-1608E1-181T	180	100	0.20	200
BCCB-1608E1-221T	220	100	0.20	200
BCCB-1608E1-301T	300	100	0.35	200
BCCB-1608E1-451T	450	100	0.40	200
BCCB-1608E1-471T	470	100	0.45	200
BCCB-1608E1-601T	600	100	0.45	200
BCCB-1608E1-751T	750	100	0.50	100
BCCB-1608E1-102T	1000	100	0.60	100

Specification For Approval

AXIS POWER 經軸電子

REEL DIMENSIONS

Unit: mm



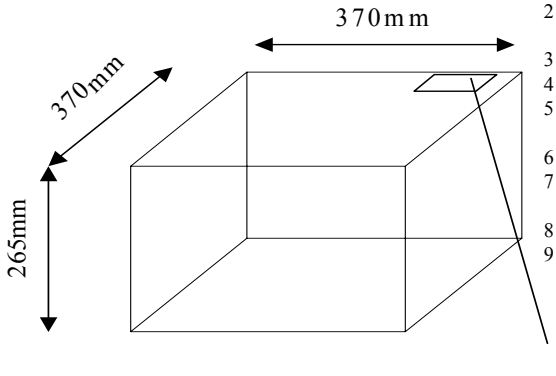
Reel Packaging Quantity									
PART SIZE		**1005**	**1608**	**201209**	**201212**	**3216**	**3225**	**4516**	**4532**
7" REEL	Qty. (pcs)	10,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000
13" REEL		NA	NA	10,000	10,000	10,000	5,000	5,000	2,500
BULK		20,000	20,000	20,000	20,000	20,000	10,000	10,000	10,000

Specification For Approval

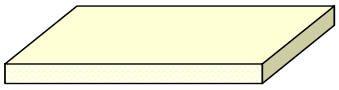
AXIS POWER 經軸電子

PACKING

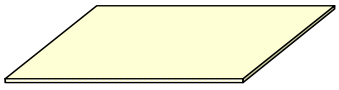
Carton size	L*W*H (mm)	Loading Quantity 7” (reels)	Loading quantity 13” (reels)
L	370*370*265	40	12
M	370*370*133	20	5
S	370*200*133	20	-



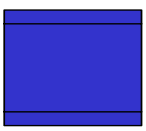
1. Put taped reel in an anti-static bag.
2. Put desiccant in an anti-static bag, and seal the anti-static bag by heat pressing.
3. Put the styrofoam in the bottom and around the box.
4. Put 4 reels which was packed as step 2 in one layer.
5. Then, put the stiffener on the top of those four reels as an isolation on between layer and layer.
6. Repeat step 4 and 5 until there is 10 layers in one box.
7. Before sealing the box, put the styrofoam on the top. Then, using adhesive tape to seal the box.
8. Stick the shipment label on the top of the box.
9. Recommended storage temperature:
   Temp : -40℃ to +85 ℃
   Humidity : 70% RH Max.



Styrofoam: X 6 (350mm*350mm*15mm)



Stiffener: X 10 (340*340mm)



Taped reel + desiccant + anti-static bag: X 40

Specification For Approval

AXIS POWER 經軸電子

RELIABILITY AND TEST CONDITION

Stress	Performance	Test Condition
Leaching (Resistance to Solder Heat)	The chip should not crack ; More than 90% of the terminal electrode should be covered with solder , free from defects, chip body should not exposed.	1.Solder: SHEN MAU (Sn60A-B20) 2.Solder Temp: 260 ±5℃ 3.Flux: Rosin 4.Dip time: 10 ±1 sec
Solderability 1 (IR Re-flow test)	1.Sn cover area need to over half thickness of chip 2.Chip shift distance under 50% of width 3.No short , open ,…etc defect symptom	1.Solder: Alpha (63SN/37PB) 2.General:135/135/195/235℃ 3.100%TIN:155/155/220/265℃ 4.Sn:Pb=63:37
Solderability 2 (After steam 8 hrs)	More than 90% of the terminal electrode should be covered with new solder	1.Steam 8 hrs 2.Solder: SHEN MAU (Sn60A-B20) 3.Solder Temp.:235 ±5℃ 4.Flux: Rosin 5.Dip time:5 ±1 sec
Terminal Strength	The terminal electrode should not break off nor the ferrite damaged	100505>0.2kgt, 160808>0.3kgt, 201209>0.6kgt, 201212>0.6kgt, 321611>1.0kgt, 322513>1.0kgt, 451616>1.0kgt, 453215>1.5kgt, ; pulling time:30 ±5 sec
Bending Strength	The ferrite should not be damaged by force applied on the right	100505>0.2kgf, 160808>0.3kgf, 201209>1.0kgf, 201212>1.0kgf, 321611>2.0kgf, 322513>2.5kgf, 451616>2.5kgf, 453215>2.5kgf, M4A3216>2.0kgf
Flexure Strength	No mechanical damage shall be noticed even when the board is bent 2 mm (0.079 inches)	1.At ambient temperature & Humidity 2.To bend 2 mm
Thermal Shock (Temperature Cycle)	1.No mechanical damage 2.Inductance should be within ±10% of the initial value 3.Q value should be within ±30% of the initial value 4.Impedance value should be within ±20% of the initial value	1.Temperature:-40 ~ 85℃ For 30 minutes each 2.Cycle: 100 cycles 3.Measurement: At ambient temperature 24 hours After test completion

Specification For Approval

AXIS POWER 經軸電子

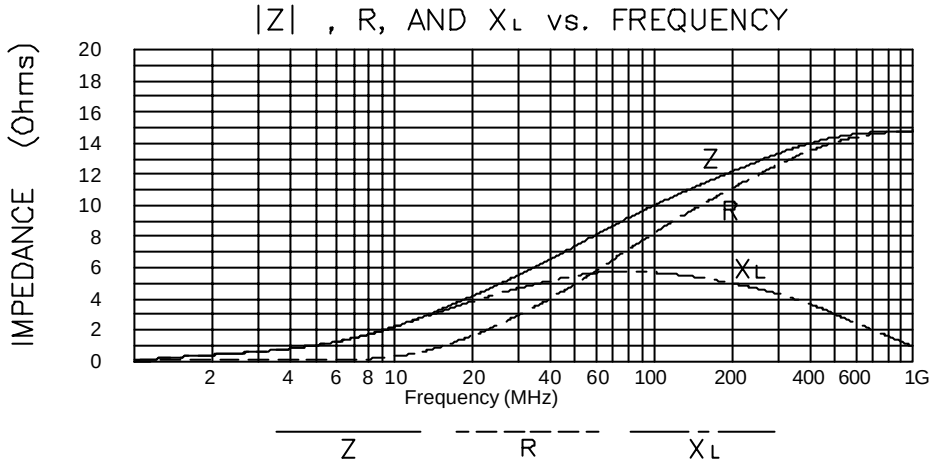
Operational Life	1.No mechanical damage 2.Inductance should be within ± 10% of the initial value 3.Q value should be within ±30% of the initial value 4.Impedance value should be within ±20% of the initial value	1. Temperature: 125 ±5℃ 2. Testing time: 1000 hrs 3. Applied current: Full rated current 4. Measurement: At ambient temperature 24 hours After test completion
Biased Humidity	1.No mechanical damage 2.Inductance should be within ±10% of the initial value 3.Q value should be within ±30 % of the initial value 4.Impedance value should be within ±20% of the initial value	1.Temperature: 40℃ 2.Humidity: 90-95 % RH 3.Applied current: Full rated current 4.Testing time: 1000 hrs 5. Measurement: At ambient temperature 24 hours After test completion
Rated Current	1.BCCB / BCFI /BCCL product Surface temperature below room temperature plus 10 ℃ 2.BCHC product surface temp. below room temperature plus 40 ℃	1.At ambient temperature & humidity 2.Testing time:5 minutes (under full rated current)

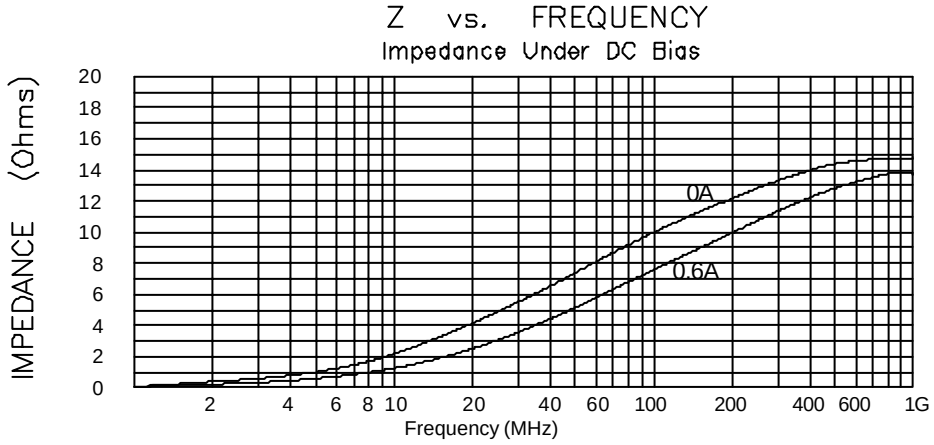
UNCONTROLLED DOCUMENT

BCCB-1608E1-100T

ELECTRICAL CHARACTERISTICS:

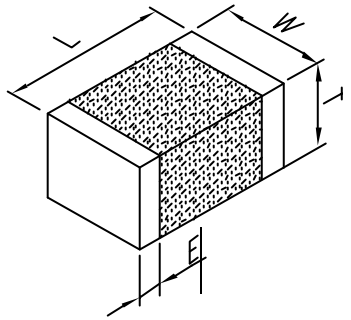
	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	10		
Minimum	7.5		
Maximum	12.5	0.05	600mA





Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

OSC level : 250 mV



PHYSICAL DIMENSIONS:

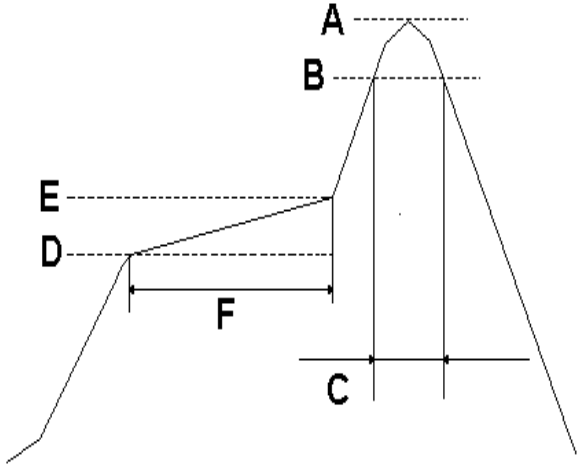
L 1.60(0.063) ±0.150(0.006)
W 0.80(0.031) ±0.150(0.006)
T 0.80(0.031) ±0.150(0.006)
E 0.30(0.012) ±0.200(0.008)

NOTES: UNLESS OTHERWISE SPECIFIED
1.-All edges and corners must be rounded.
2.-Dimensions are in millimeters (inches)
3.-Taped and Reeled per current EIA specification.

Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE

A	*260 ± 5/-0℃*
B	*230℃*
C	*5~10 sec*
D	*150℃*
E	*180℃*
F	*90 ± 30sec*

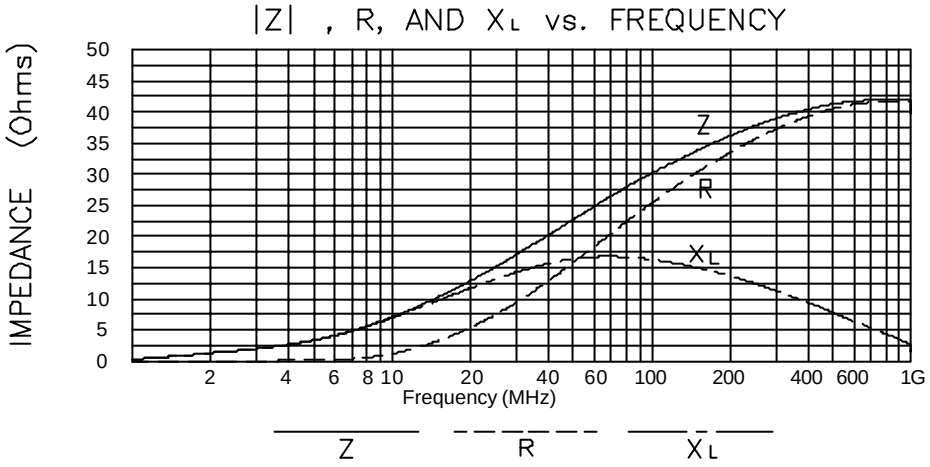


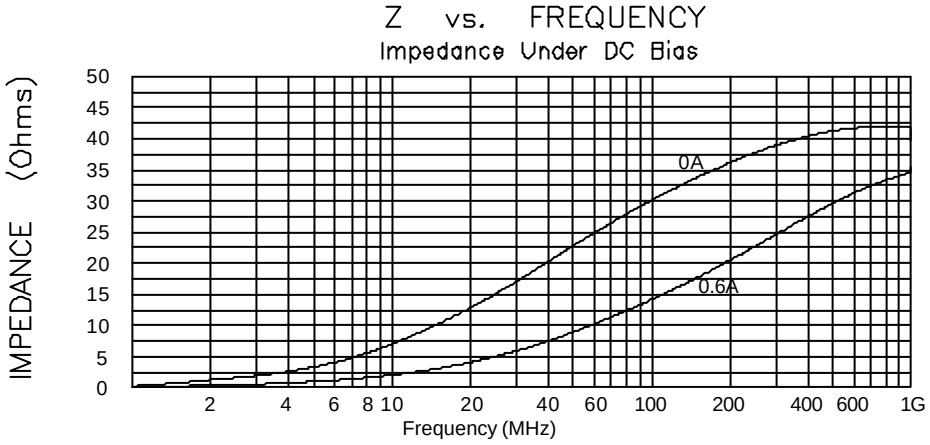
UNCONTROLLED DOCUMENT

BCCB-1608E1-300T

ELECTRICAL CHARACTERISTICS:

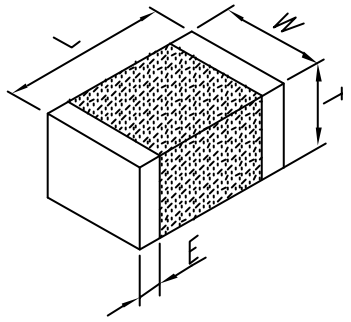
	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	30		
Minimum	22.5		
Maximum	37.5	0.2	400mA





Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

OSC level : 250 mV



PHYSICAL DIMENSIONS:

L 1.60(0.063) ±0.150(0.006)

W 0.80(0.031) ±0.150(0.006)

T 0.80(0.031) ±0.150(0.006)

E 0.30(0.012) ±0.200(0.008)

NOTES: UNLESS OTHERWISE SPECIFIED

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Recommended Soldering Conditions

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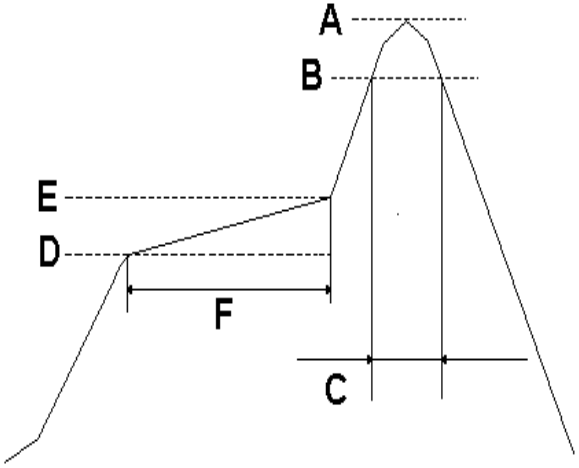
A	*260 ± 5/-0℃*
B	*230℃*
C	*5~10 sec*
D	*150℃*
E	*180℃*
F	*90 ± 30sec*

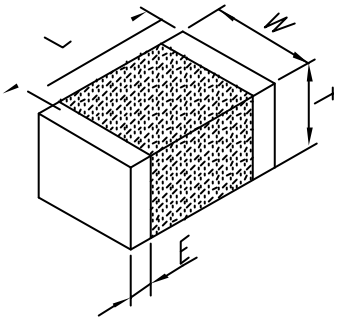


UNCONTROLLED DOCUMENT

BCCB-1608E1-600T

ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	60		
Minimum	45		
Maximum	75	0.2	300mA



PHYSICAL DIMENSIONS:

L 1.60(0.063) ±0.150(0.006)

W 0.80(0.031) ±0.150(0.006)

T 0.80(0.031) ±0.150(0.006)

E 0.30(0.012) ±0.200(0.008)

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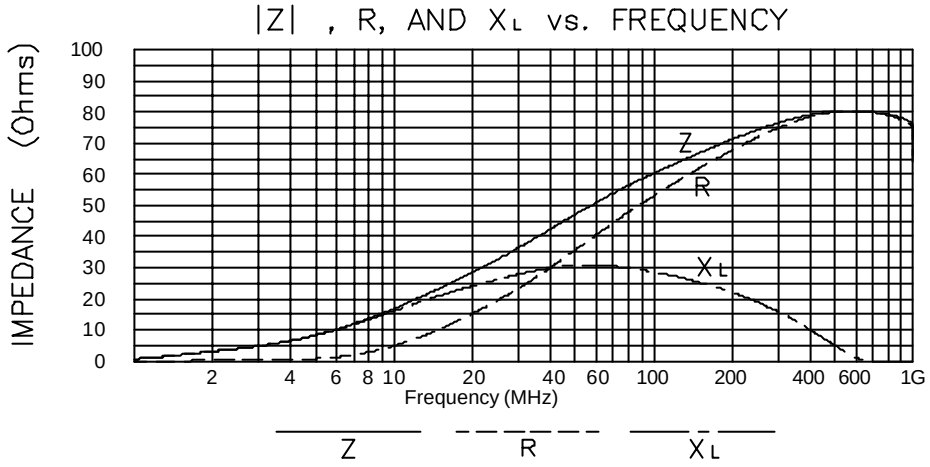
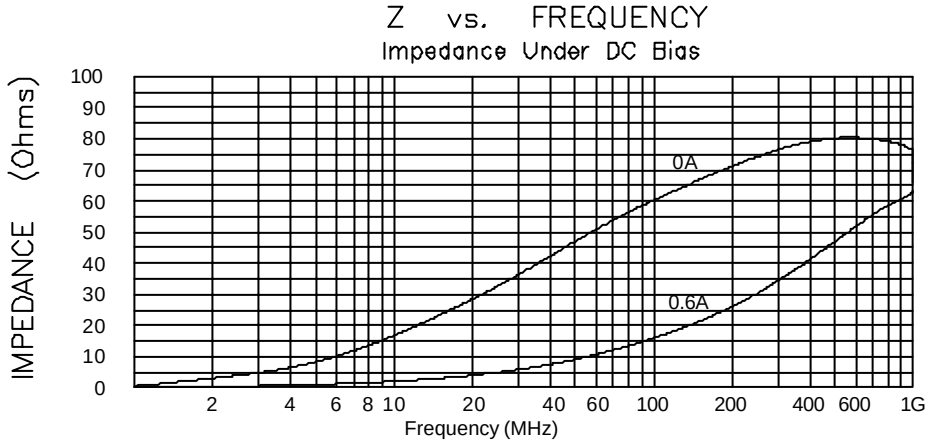
2.-Dimensions are in millimeters (inches)

3.-Taped and Reeled per current EIA specification.





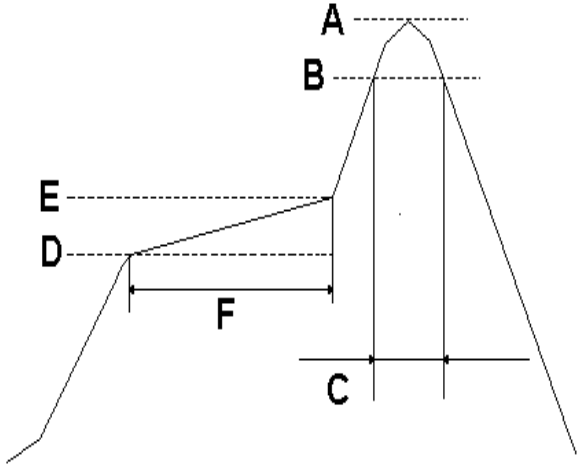
Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

OSC level : 250 mV

Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE

A	*260 ± 5/-0℃*
B	*230℃*
C	*5~10 sec*
D	*150℃*
E	*180℃*
F	*90 ± 30sec*

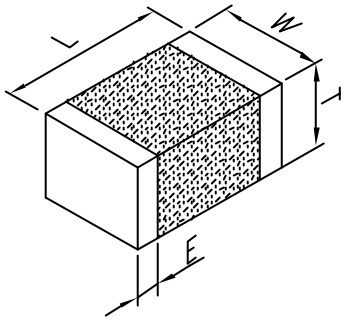


UNCONTROLLED DOCUMENT

BCCB-1608E1-800T

ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	80		
Minimum	60		
Maximum	100	0.2	300mA



PHYSICAL DIMENSIONS:

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W 0.80(0.031) ±0.150(0.006)

T 0.80(0.031) ±0.150(0.006)

E 0.30(0.012) ±0.200(0.008)

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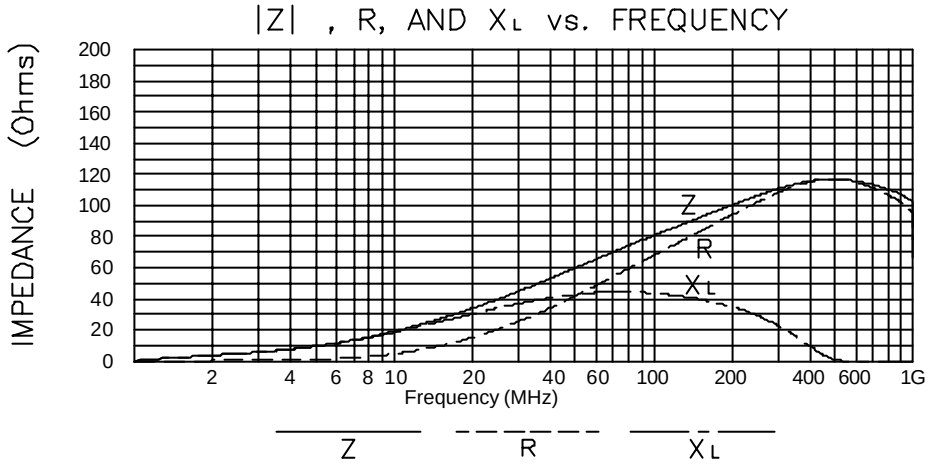
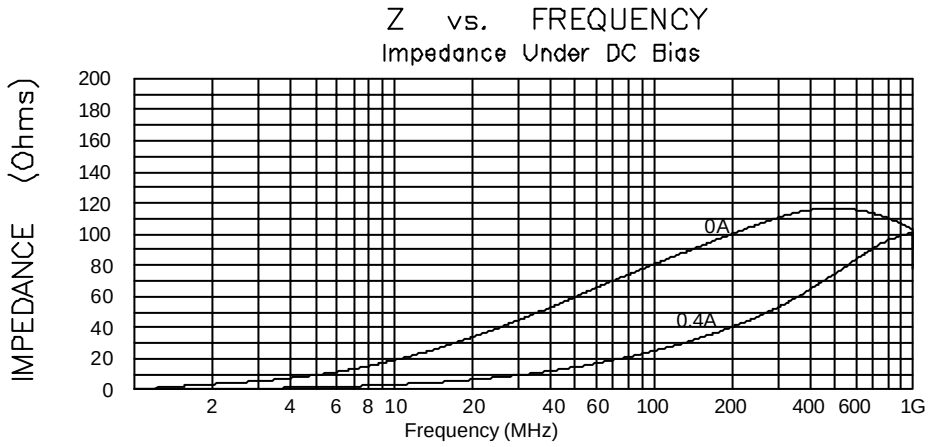




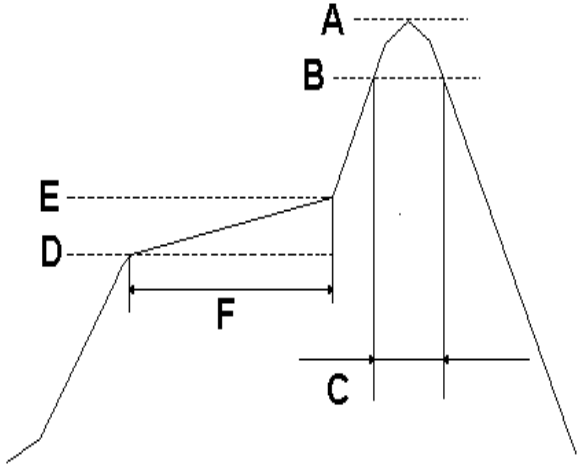
Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

OSC level : 250 mV

Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE

A	*260 ± 5/-0℃*
B	*230℃*
C	*5~10 sec*
D	*150℃*
E	*180℃*
F	*90 ± 30sec*

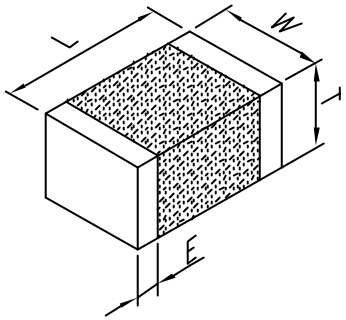


UNCONTROLLED DOCUMENT

BCCB-1608E1-101T

ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	100		
Minimum	75		
Maximum	125	0.2	200mA



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W 0.80(0.031) ±0.150(0.006)

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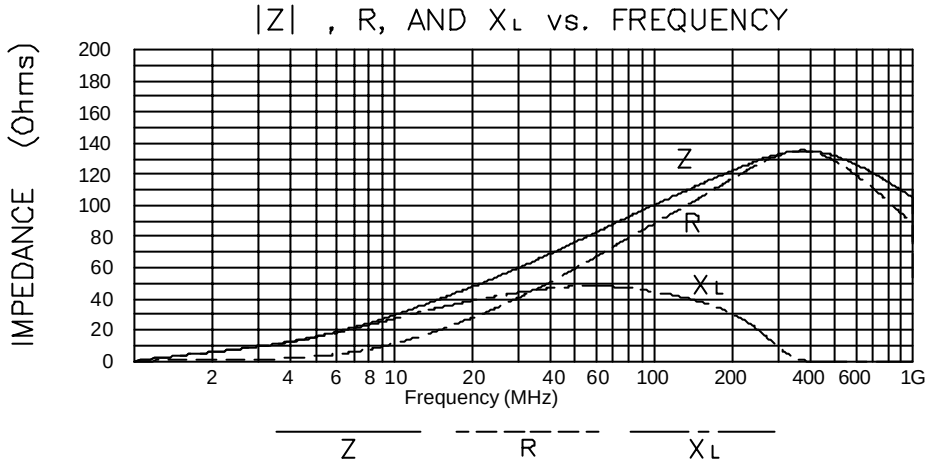

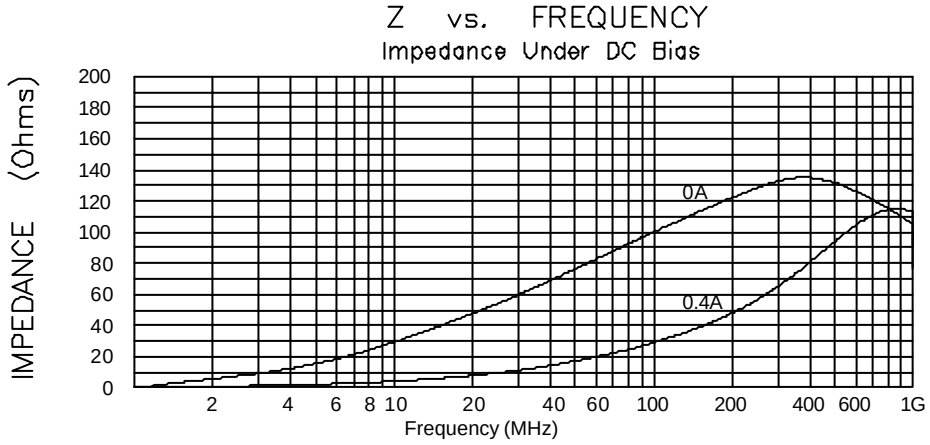

Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

OSC level : 250 mV

Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE

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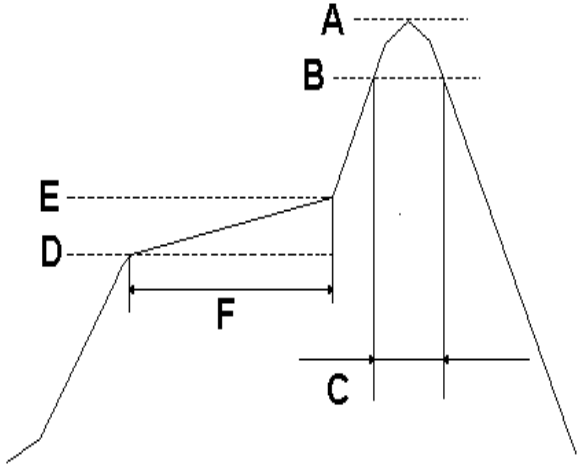
E	*180℃*
F	*90 ± 30sec*

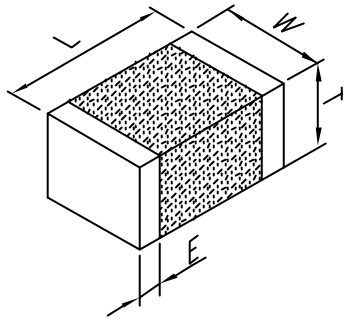


UNCONTROLLED DOCUMENT

BCCB -1608E1-121T

ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	120		
Minimum	90		
Maximum	150	0.2	200mA



PHYSICAL DIMENSIONS:

L 1.60(0.063) ±0.150(0.006)

W 0.80(0.031) ±0.150(0.006)

T 0.80(0.031) ±0.150(0.006)

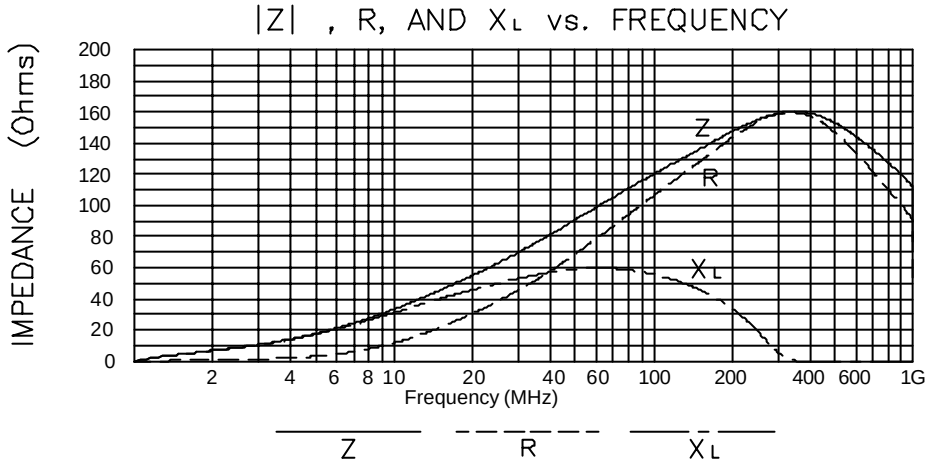
E 0.30(0.012) ±0.200(0.008)

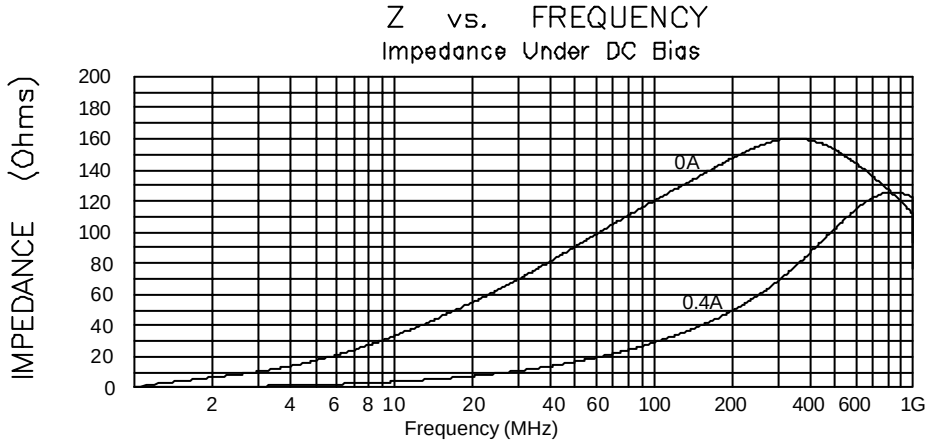
NOTES: UNLESS OTHERWISE SPECIFIED

1.-All edges and corners must be rounded.

2.-Dimensions are in millimeters (inches)

3.-Taped and Reeled per current EIA specification.

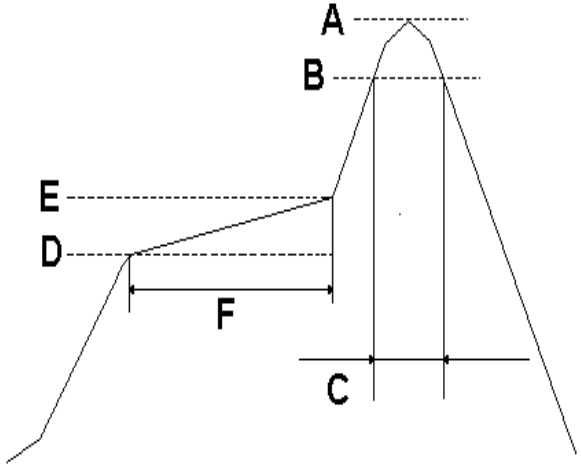




Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE

A	*260 ± 5/-0℃*
B	*230℃*
C	*5~10 sec*
D	*150℃*
E	*180℃*
F	*90 ± 30sec*



Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

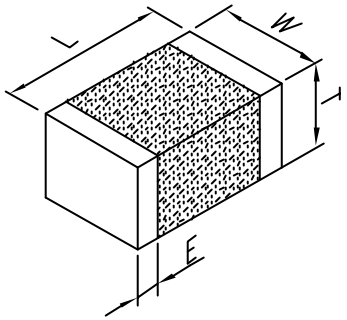
OSC level : 250 mV

UNCONTROLLED DOCUMENT

BCCB-1608E1-181T

ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	180		
Minimum	135		
Maximum	225	0.2	200mA



PHYSICAL DIMENSIONS:

L 1.60(0.063) ±0.150(0.006)

W 0.80(0.031) ±0.150(0.006)

T 0.80(0.031) ±0.150(0.006)

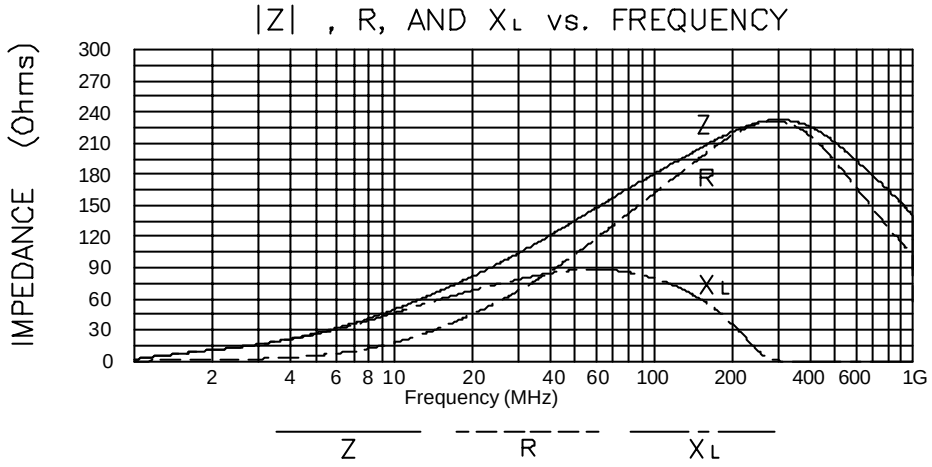
E 0.30(0.012) ±0.200(0.008)

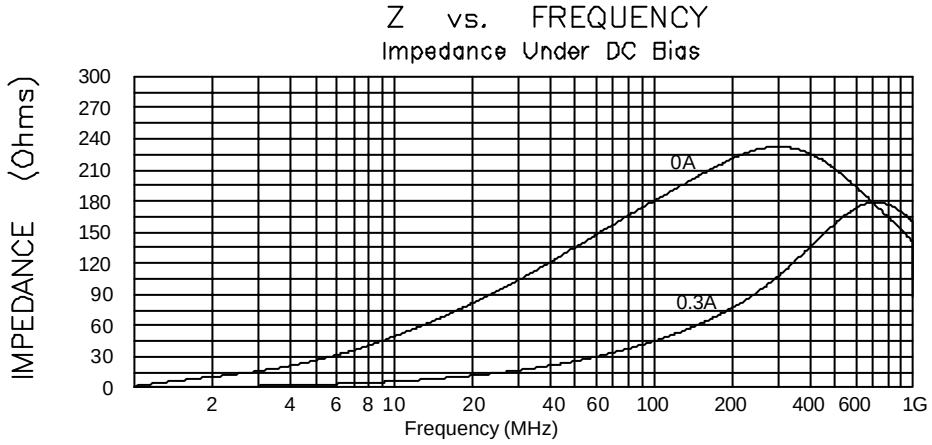
NOTES: UNLESS OTHERWISE SPECIFIED

1.-All edges and corners must be rounded.

2.-Dimensions are in millimeters (inches)

3.-Taped and Reeled per current EIA specification.

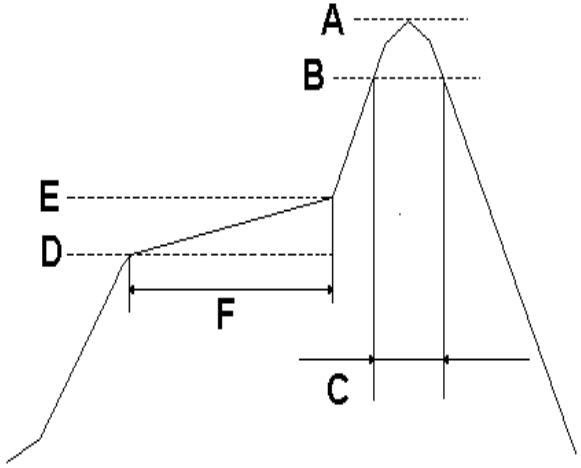




Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE

A	*260 ± 5/-0℃*
B	*230℃*
C	*5~10 sec*
D	*150℃*
E	*180℃*
F	*90 ± 30sec*



Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

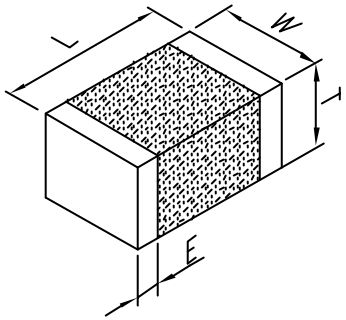
OSC level : 250 mV

UNCONTROLLED DOCUMENT

BCCB-1608E1- 221T

ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	220		
Minimum	165		
Maximum	275	0.20	200mA



PHYSICAL DIMENSIONS:

L 1.60(0.063) ±0.150(0.006)

W 0.80(0.031) ±0.150(0.006)

T 0.80(0.031) ±0.150(0.006)

E 0.30(0.012) ±0.200(0.008)

NOTES: UNLESS OTHERWISE SPECIFIED

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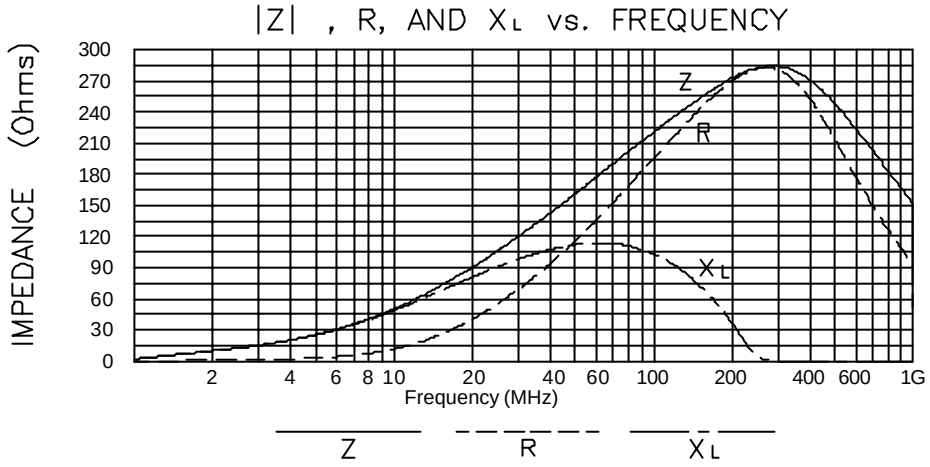
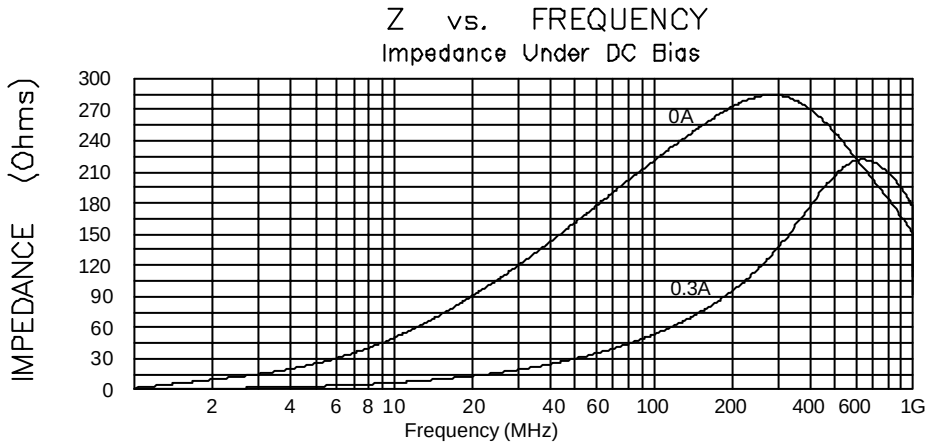
2.-Dimensions are in millimeters (inches)

3.-Taped and Reeled per current EIA specification.

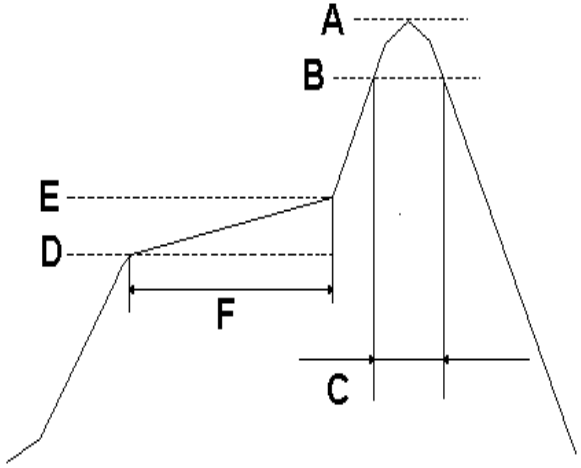




Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE

A	*260 ± 5/-0℃*
B	*230℃*
C	*5~10 sec*
D	*150℃*
E	*180℃*
F	*90 ± 30sec*



Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

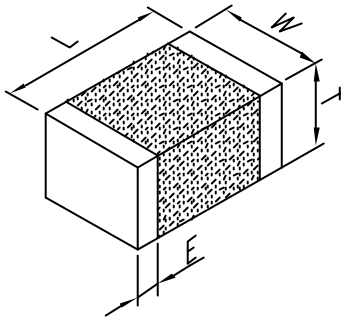
OSC level : 250 mV

UNCONTROLLED DOCUMENT

BCCB-1608E1-301T

ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	300		
Minimum	225		
Maximum	375	0.35	200mA



PHYSICAL DIMENSIONS:

L 1.60(0.063) ±0.150(0.006)

W 0.80(0.031) ±0.150(0.006)

T 0.80(0.031) ±0.150(0.006)

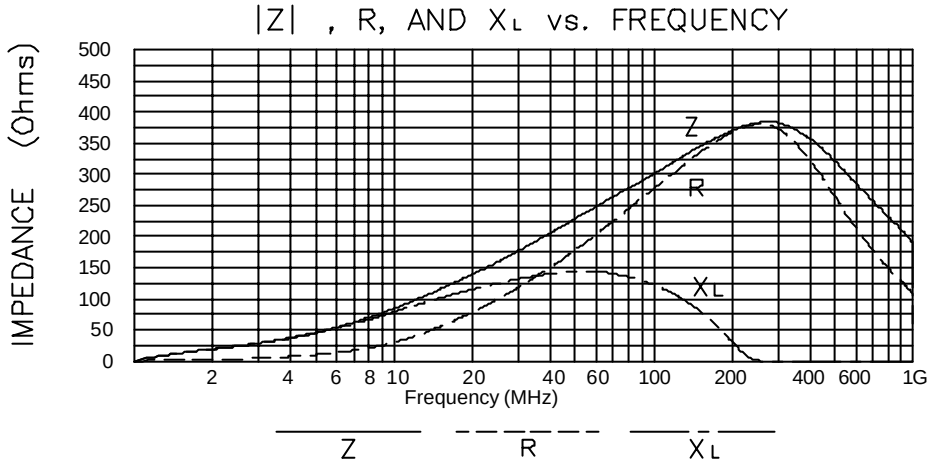
E 0.30(0.012) ±0.200(0.008)

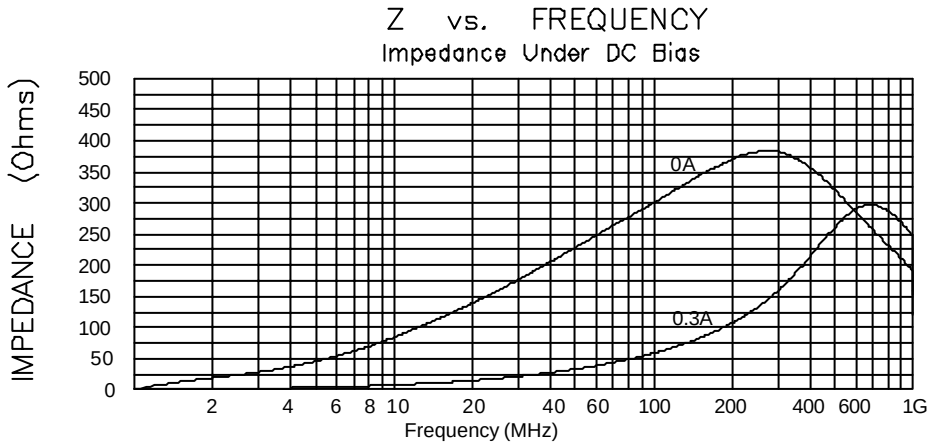
NOTES: UNLESS OTHERWISE SPECIFIED

1.-All edges and corners must be rounded.

2.-Dimensions are in millimeters (inches)

3.-Taped and Reeled per current EIA specification.





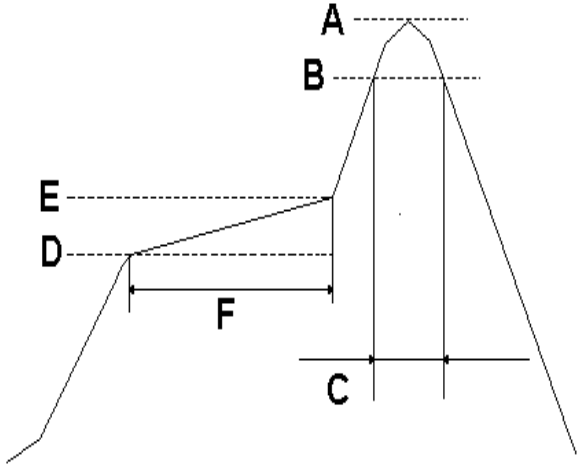
Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

OSC level : 250 mV

Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE

A	*260 ± 5/-0℃*
B	*230℃*
C	*5~10 sec*
D	*150℃*
E	*180℃*
F	*90 ± 30sec*

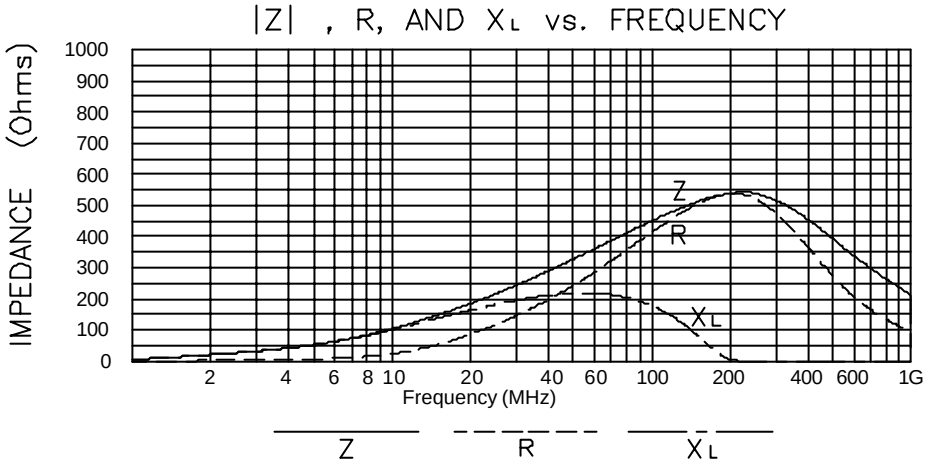


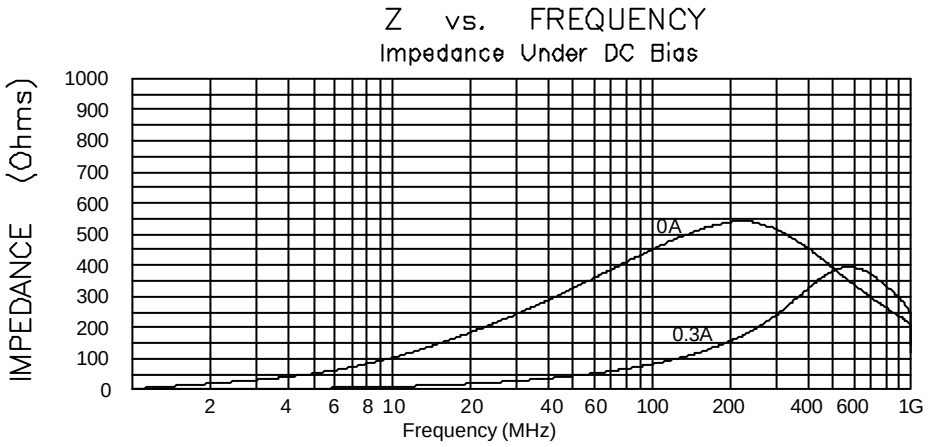
UNCONTROLLED DOCUMENT

BCCB-1608E1- 451T

ELECTRICAL CHARACTERISTICS:

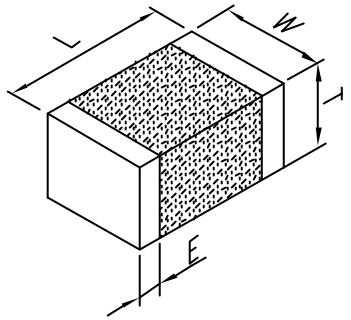
	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	450		
Minimum	337.5		
Maximum	562.5	0.4	200mA





Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

OSC level : 250 mV



PHYSICAL DIMENSIONS:

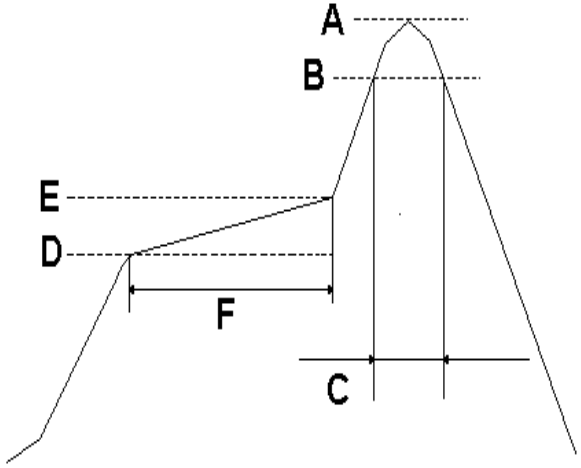
L 1.60(0.063) ±0.150(0.006)
W 0.80(0.031) ±0.150(0.006)
T 0.80(0.031) ±0.150(0.006)
E 0.30(0.012) ±0.200(0.008)

NOTES: UNLESS OTHERWISE SPECIFIED
1.-All edges and corners must be rounded.
2.-Dimensions are in millimeters (inches)
3.-Taped and Reeled per current EIA specification.

Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE

A	*260 ± 5/-0°C*
B	*230°C*
C	*5~10 sec*
D	*150°C*
E	*180°C*
F	*90 ± 30sec*

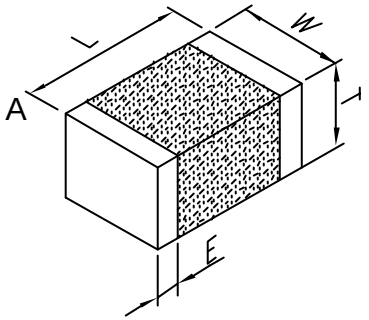


UNCONTROLLED DOCUMENT

BCCB-1608E1-471T

ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	470		
Minimum	352.5		
Maximum	587.5	0.45	200m



PHYSICAL DIMENSIONS:

L 1.60(0.063) ±0.150(0.006)

W 0.80(0.031) ±0.150(0.006)

T 0.80(0.031) ±0.150(0.006)

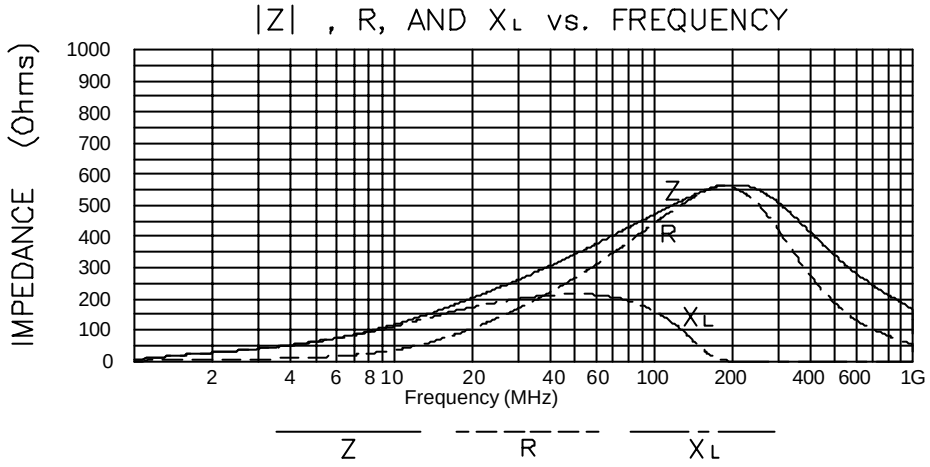
E 0.30(0.012) ±0.200(0.008)

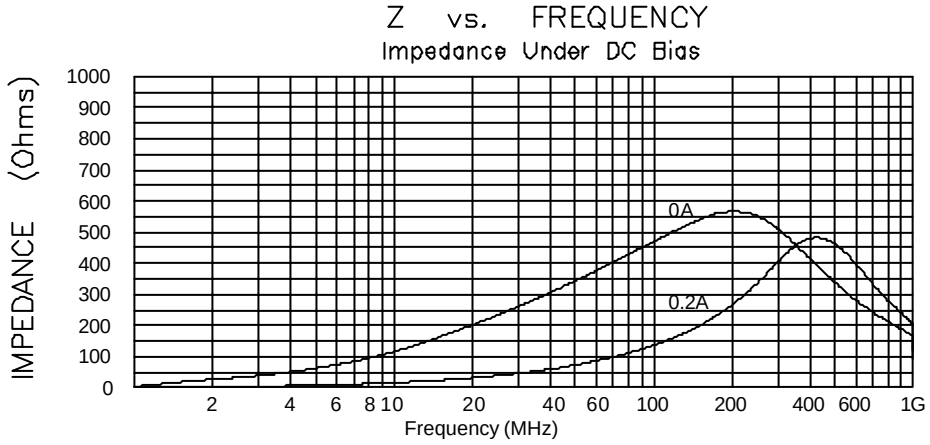
NOTES: UNLESS OTHERWISE SPECIFIED

1.-All edges and corners must be rounded.

2.-Dimensions are in millimeters (inches)

3.-Taped and Reeled per current EIA specification.

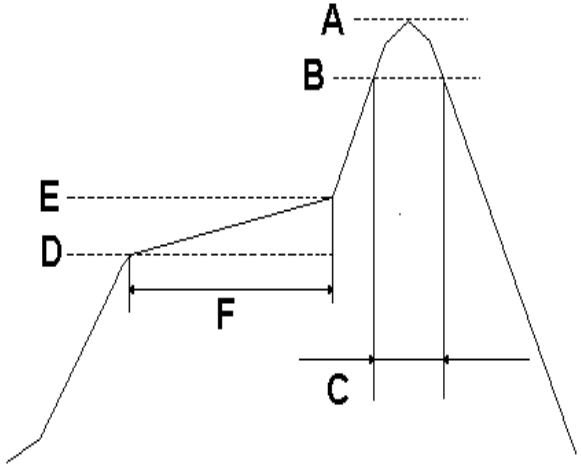




Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE

A	*260 ± 5/-0℃*
B	*230℃*
C	*5~10 sec*
D	*150℃*
E	*180℃*
F	*90 ± 30sec*



Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

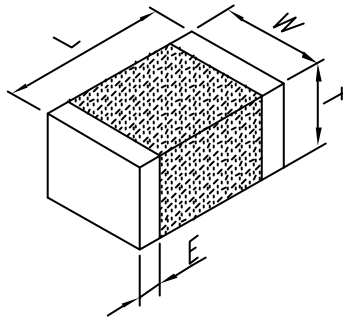
OSC level : 250 mV

UNCONTROLLED DOCUMENT

BCCB -1608E1-601T

ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	600		
Minimum	450		
Maximum	750	0.45	200mA



PHYSICAL DIMENSIONS:

L 1.60(0.063) ±0.150(0.006)

W 0.80(0.031) ±0.150(0.006)

T 0.80(0.031) ±0.150(0.006)

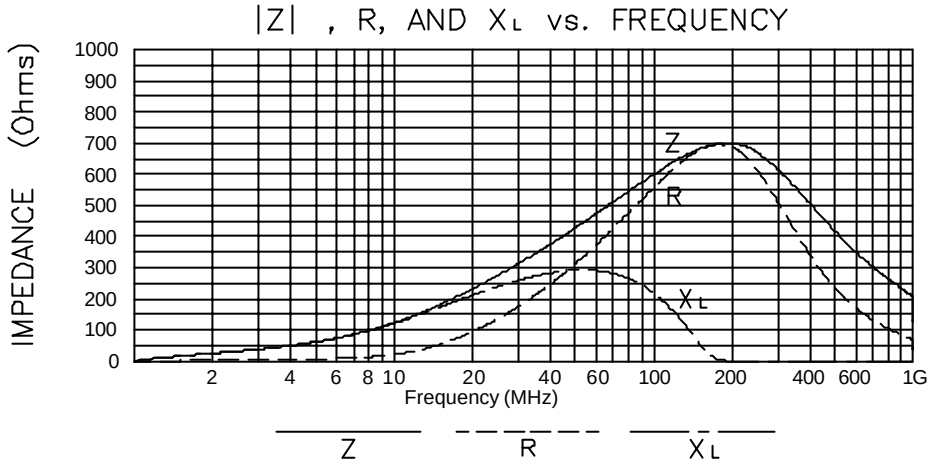
E 0.30(0.012) ±0.200(0.008)

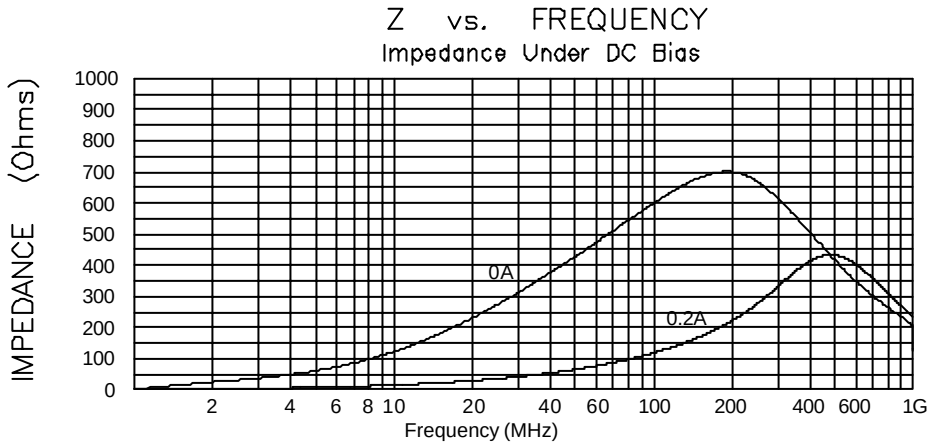
NOTES: UNLESS OTHERWISE SPECIFIED

1.-All edges and corners must be rounded.

2.-Dimensions are in millimeters (inches)

3.-Taped and Reeled per current EIA specification.





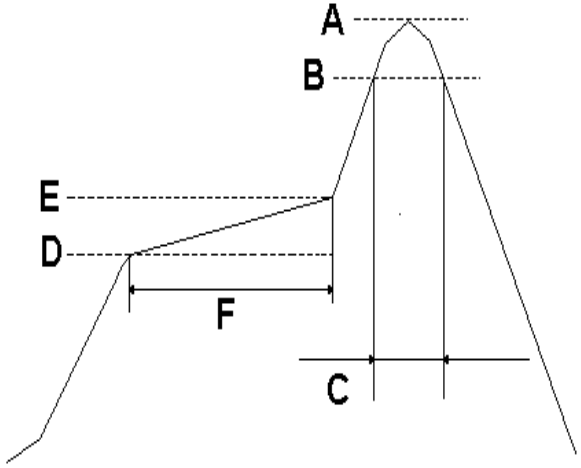
Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

OSC level : 250 mV

Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE

A	*260 ± 5/-0℃*
B	*230℃*
C	*5~10 sec*
D	*150℃*
E	*180℃*
F	*90 ± 30sec*

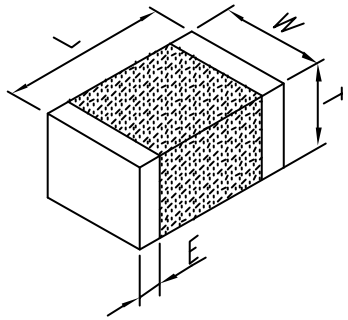


UNCONTROLLED DOCUMENT

BCCB-1608E1-751T

ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	750		
Minimum	562.5		
Maximum	937.5	0.5	100mA



PHYSICAL DIMENSIONS:

L 1.60(0.063) ±0.150(0.006)

W 0.80(0.031) ±0.150(0.006)

T 0.80(0.031) ±0.150(0.006)

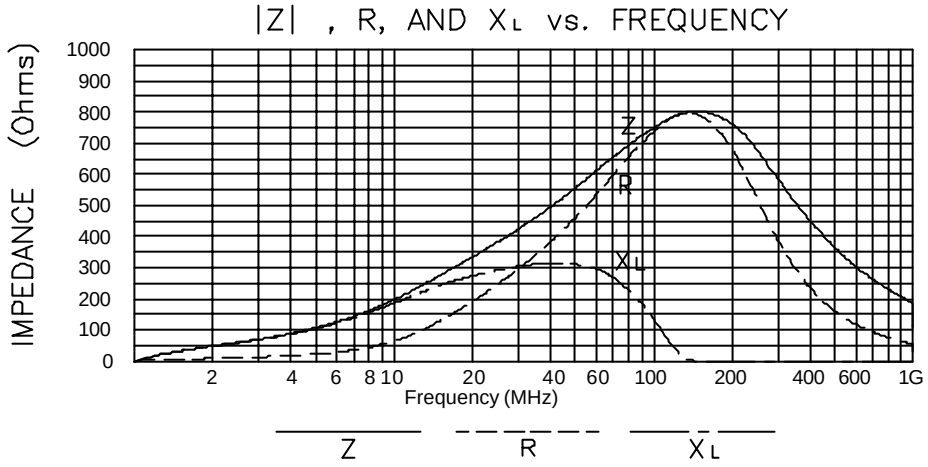
E 0.30(0.012) ±0.200(0.008)

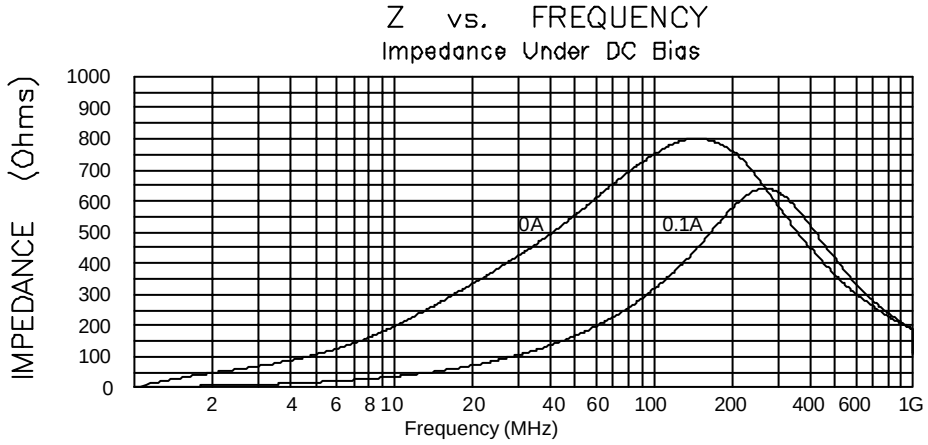
NOTES: UNLESS OTHERWISE SPECIFIED

1.-All edges and corners must be rounded.

2.-Dimensions are in millimeters (inches)

3.-Taped and Reeled per current EIA specification.

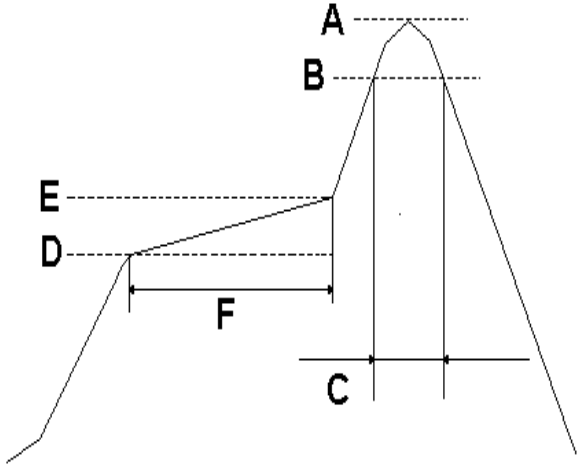




Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE

A	*260 ± 5/-0℃*
B	*230℃*
C	*5~10 sec*
D	*150℃*
E	*180℃*
F	*90 ± 30sec*



Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

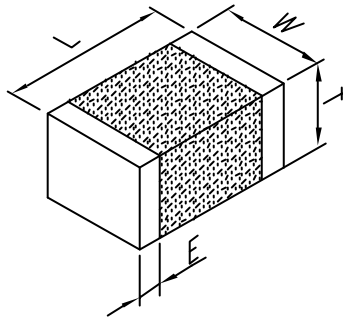
OSC level : 250 mV

UNCONTROLLED DOCUMENT

BCCB - 1608E1-102T

ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	1000		
750 Minimum			
Maximum	1250	0.6	100mA



PHYSICAL DIMENSIONS:

L 1.60(0.063) ±0.150(0.006)

W 0.80(0.031) ±0.150(0.006)

T 0.80(0.031) ±0.150(0.006)

E 0.30(0.012) ±0.200(0.008)

NOTES: UNLESS OTHERWISE SPECIFIED

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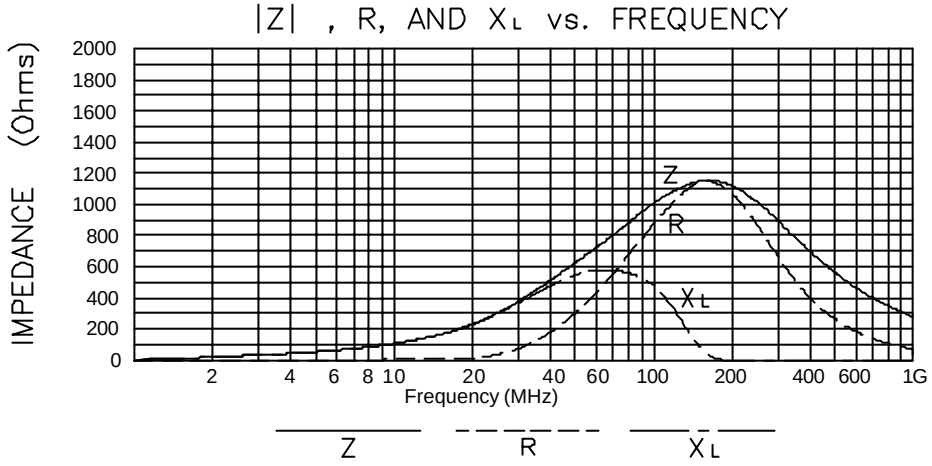
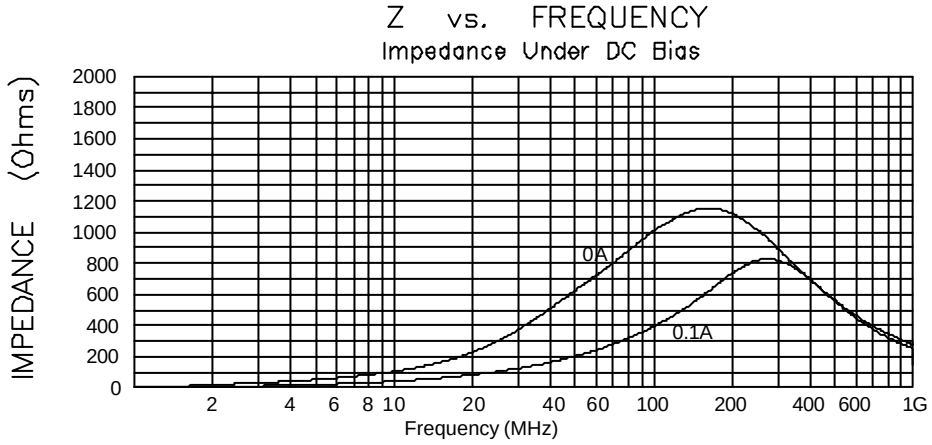
3.-Taped and Reeled per current EIA specification.





Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

OSC level : 250 mV

Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE

A	*260 ± 5/-0℃*
B	*230℃*
C	*5~10 sec*
D	*150℃*
E	*180℃*
F	*90 ± 30sec*