Specification For Approval

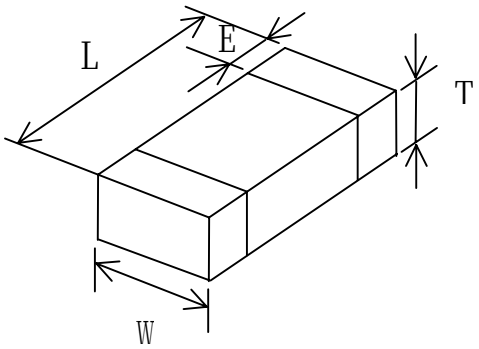
AXIS POWER 經軸電子

Multilayer chip bead 2012(0805) series

PRODUCT DETAIL

Electrical Characteristics			Test Instruments
Z	Ω (Ref. Page 2)	TEST FREQ: 100 MHz	•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	2012E1
L	2.0±0.20
W	1.25±0.2
T	0.9±0.20
E	0.5±0.30

Specification For Approval

AXIS POWER 經軸電子

Multilayer chip bead 2012(0805) series

▪PART NUMBER AND CHARACTERISTICS TABLE

BCCB-2012ES Series

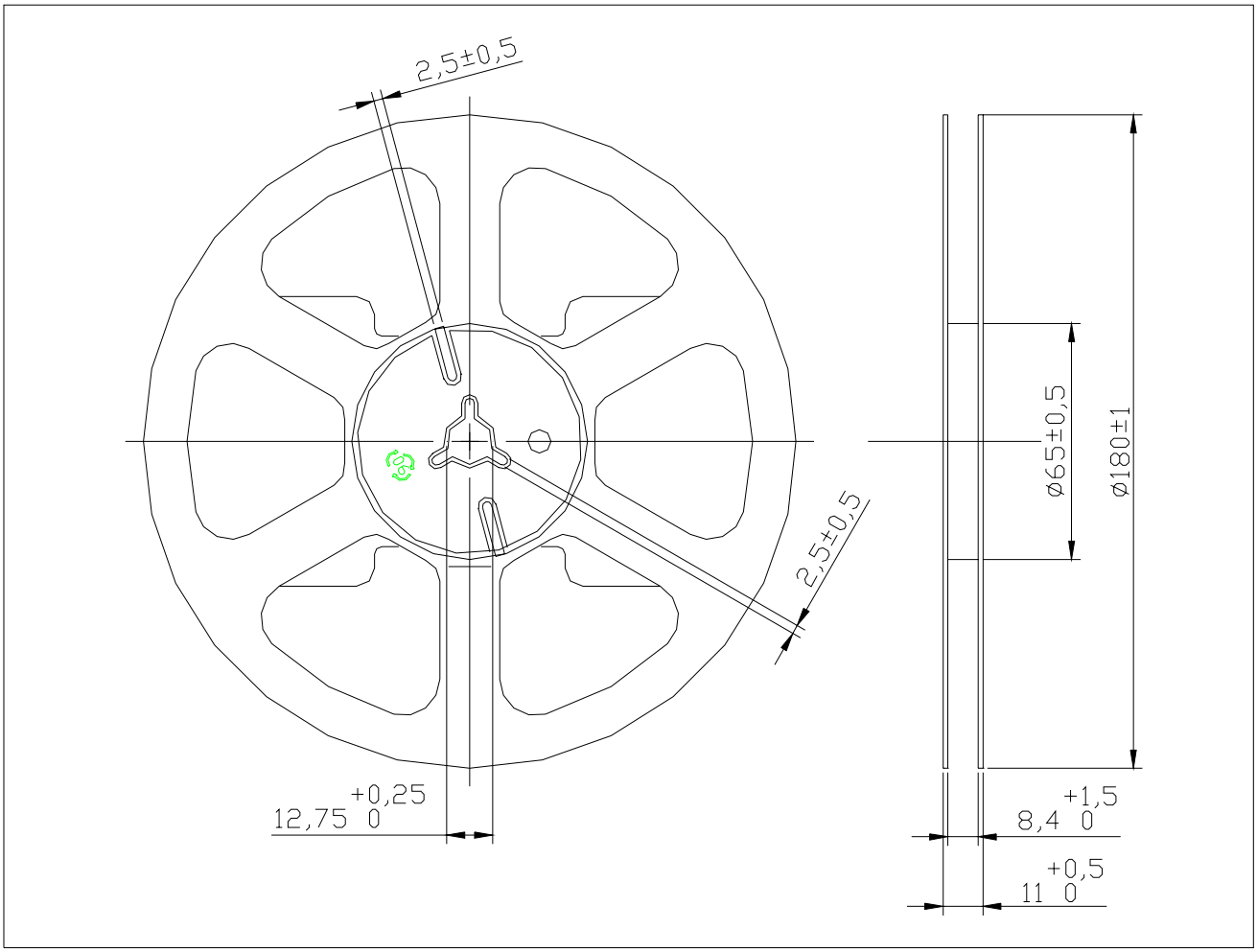
Part No.	Impedance(Ω) +/-25%	Test Freq.(MHz)	DCR(Ω) (Max.)	Rated Current (mA)
BCCB-2012ES-110Q	11	100	0.03	3000
BCCB-2012ES-170Q	17	100	0.03	3000
BCCB-2012ES-300Q	30	100	0.03	3000
BCCB-2012ES-470Q	47	100	0.03	3000
BCCB-2012ES-520Q	52	100	0.03	3000
BCCB-2012ES-600Q	60	100	0.04	3000
BCCB-2012ES-800U	80	100	0.02	5000
BCCB-2012ES-121U	120	100	0.02	5000
BCCB-2012ES-221Q	220	100	0.04	3000
BCCB-2012ES-251Q	250	100	0.04	3000
BCCB-2012ES-301N	300	100	0.09	2000
BCCB-2012ES-331N	330	100	0.09	2000
BCCB-2012ES-601N	600	100	0.09	2000
BCCB-2012ES-102M	1000	100	0.30	1500
BCCB-2012ES-152L	1500	100	0.40	1000

Specification For Approval

AXIS POWER 經軸電子

REEL DIMENSIONS

Unit: mm



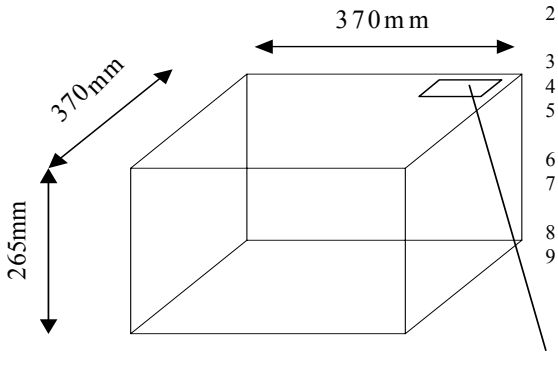
Reel Packaging Quantity									
PART SIZE		**1005**	**1608**	**201209**	**201212**	**3216**	**3225**	**4516**	**4532**
7" REEL	Qty. (pcs)	10,000	4,000	4,000	2,000	3,000	2,000	2,000	1,000
13" REEL		NA	NA	10,000	10,000	10,000	5,000	5,000	2,500
BULK		20,000	20,000	20,000	20,000	20,000	10,000	10,000	10,000

Specification For Approval

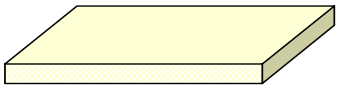
AXIS POWER 經軸電子

PACKING

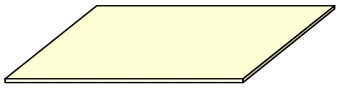
Carton size	L*W*H (mm)	Loading Quantity 7” (reels)	Loading quantity 13” (reels)
L	370*370*265	40	12
M	370*370*133	20	5
S	370*200*133	20	-



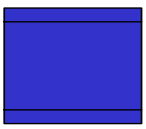
1. Put taped reel in an anti-static bag.
2. Put desiccant in an anti-static bag, and seal the anti-static bag by heat pressing.
3. Put the styrofoam in the bottom and around the box.
4. Put 4 reels which was packed as step 2 in one layer.
5. Then, put the stiffener on the top of those four reels as an 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: Alpha Sn100 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: KOKI S3x58-M405 SnAg3Cu0.5 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: Alpha Sn100 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, BCCBA3216>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

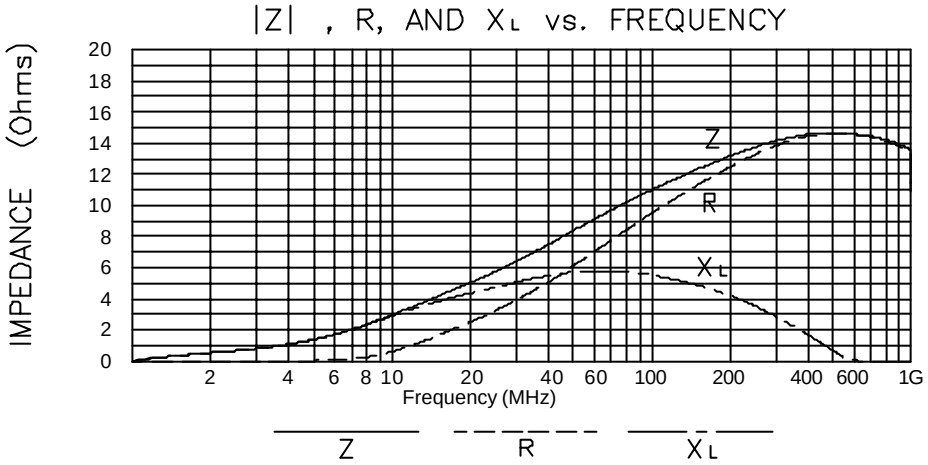
Operational Life	1.No mechanical damage 2.Inductance should be within ± 10% of the initial value 3.Q value should be within ±30% of the initial value 4.Impedance value should be within ±20% of the initial value	1. Temperature: 125 ±5℃ 2. Testing time: 1000 hrs 3. Applied current: Full rated current 4. 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 / BCCL /BCCLH product Surface temperature below room temperature plus 10 ℃ 2.BCCB-ES product surface temp. below room temperature plus 40 ℃	1.At ambient temperature & humidity 2.Testing time:5 minutes (under full rated current)

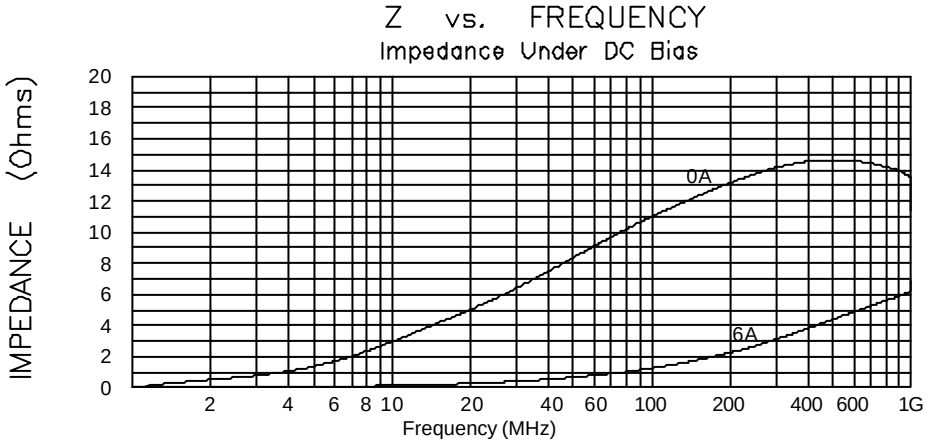
UNCONTROLLED DOCUMENT

BCCB-2012ES-110W

ELECTRICAL CHARACTERISTICS:

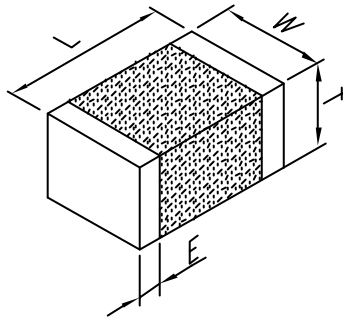
	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	11		
Minimum	8.25		
Maximum	13.75	0.015	6000mA





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

OSC level : 250 mV



PHYSICAL DIMENSIONS:

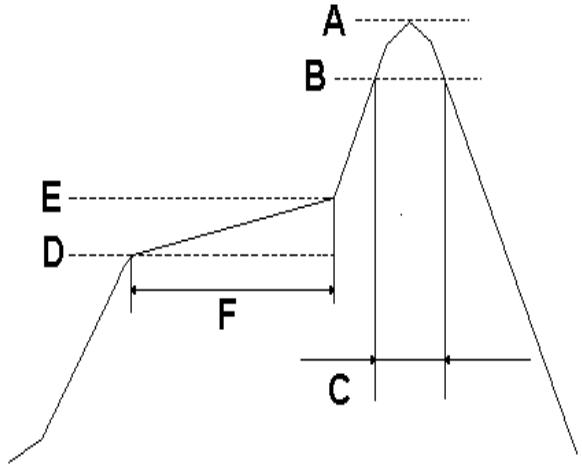
L 2.00(0.079) ±0.200(0.008)
W 1.25(0.049) ±0.200(0.008)
T 0.90(0.035) ±0.200(0.008)
E 0.50(0.020) ±0.300(0.012)

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 PR(

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

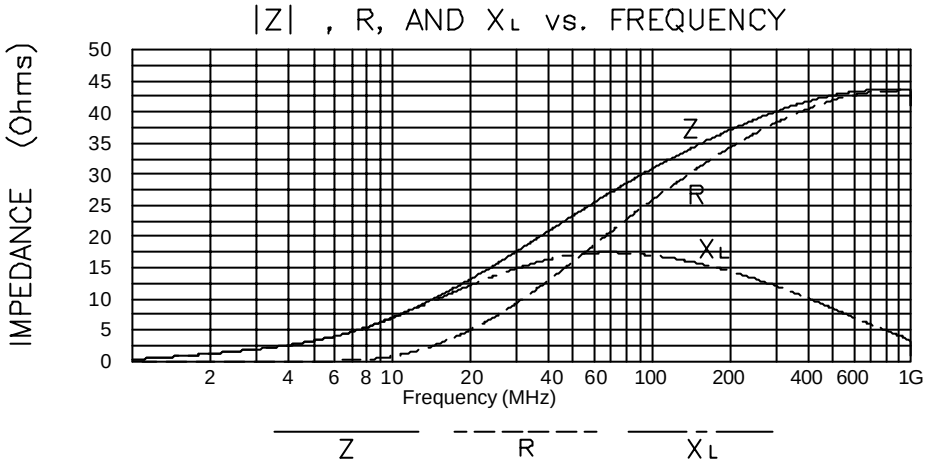


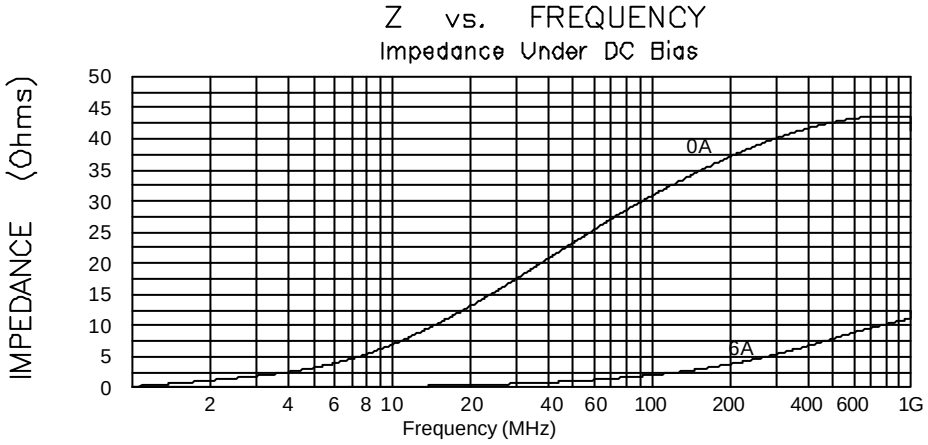
UNCONTROLLED DOCUMENT

BCCB-2012ES-310W

ELECTRICAL CHARACTERISTICS:

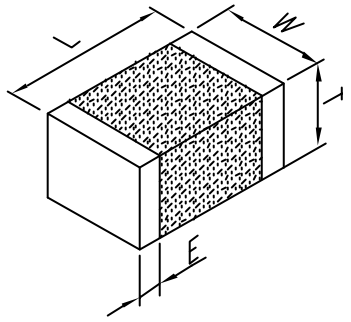
	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	31		
Minimum	23.25		
Maximum	38.75	0.015	6000mA





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

OSC level : 250 mV



PHYSICAL DIMENSIONS:

L 2.00(0.079) ±0.200(0.008)

W 1.25(0.049) ±0.200(0.008)

T 0.90(0.035) ±0.200(0.008)

E 0.50(0.020) ±0.300(0.012)

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B	*230°C*
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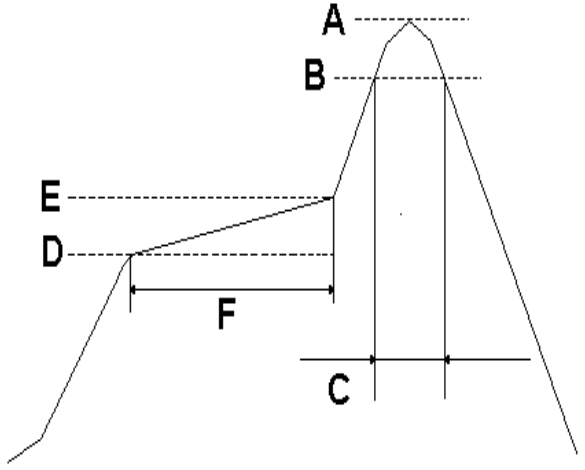
D	*150°C*
E	*180°C*
F	*90 ± 30sec*

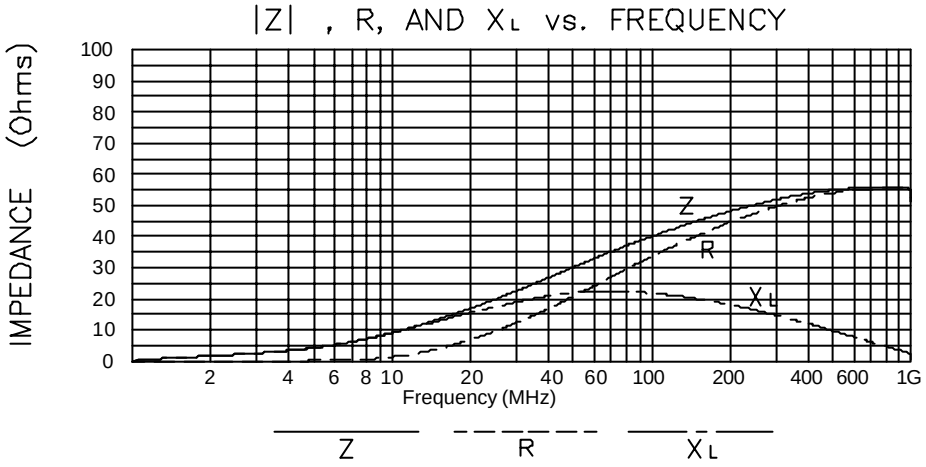


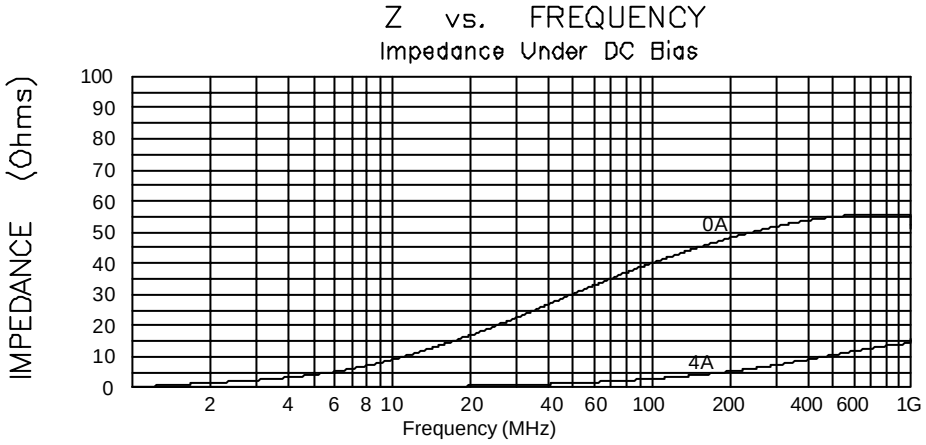
UNCONTROLLED DOCUMENT

BCCB-2012ES-400R

ELECTRICAL CHARACTERISTICS:

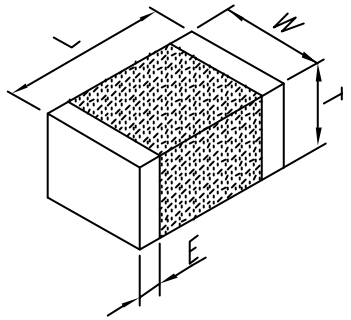
	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	40		
Minimum	30		
Maximum	50	0.03	4000mA





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

OSC level : 250 mV



PHYSICAL DIMENSIONS:

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W 1.25(0.049) ±0.200(0.008)

T 0.90(0.035) ±0.200(0.008)

E 0.50(0.020) ±0.300(0.012)

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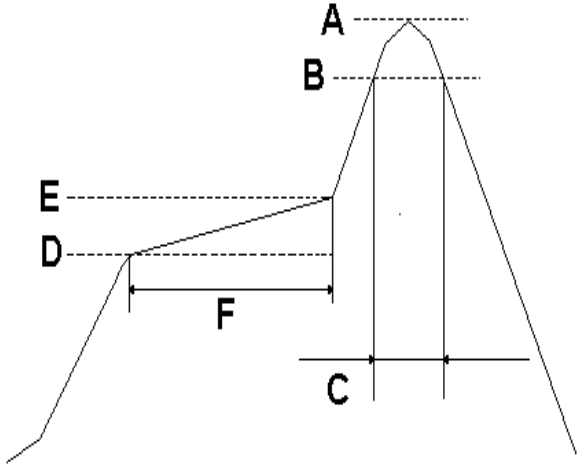
B	*230°C*
C	*5~10 sec*
D	*150°C*
E	*180°C*
F	*90 ± 30sec*

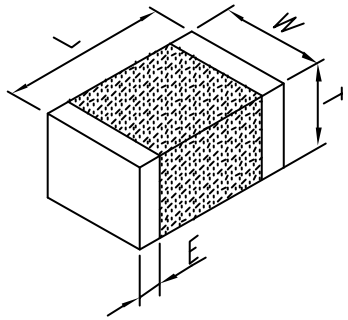


UNCONTROLLED DOCUMENT

BCCB-2012ES-600Q

ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	60		
Minimum	45		
Maximum	75	0.04	3000mA



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T 0.90(0.035) ±0.200(0.008)

E 0.50(0.020) ±0.300(0.012)

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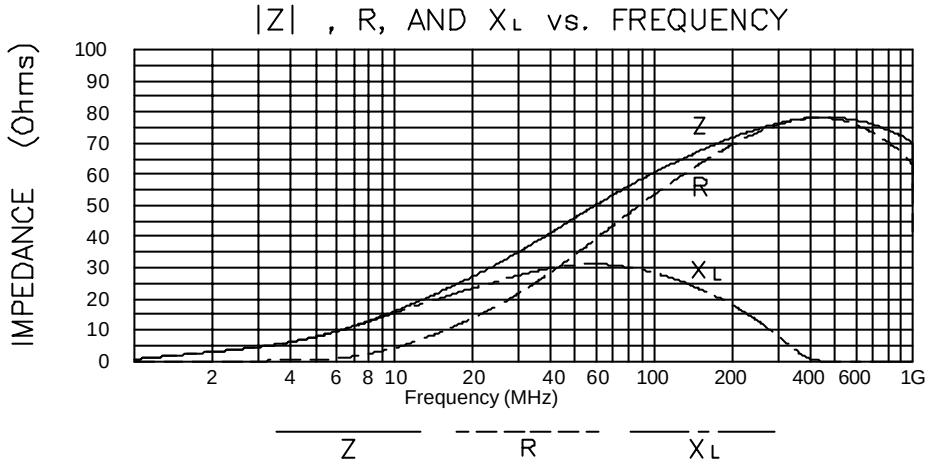
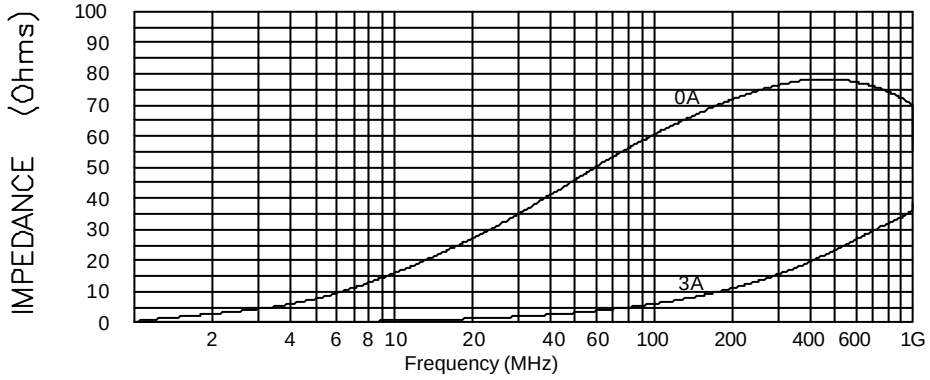




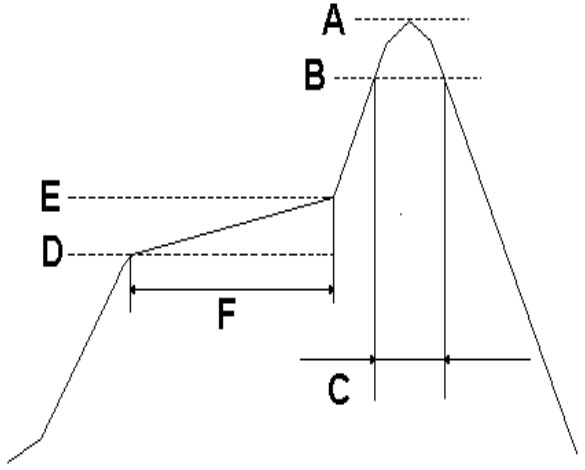
Agilent 4291B RF Impedance/Material Analyzer
HP 16192A Fixture

OSC level : 250 mV

Recommended Soldering Conditions

(REFLOW TEMPERATURE PR(

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

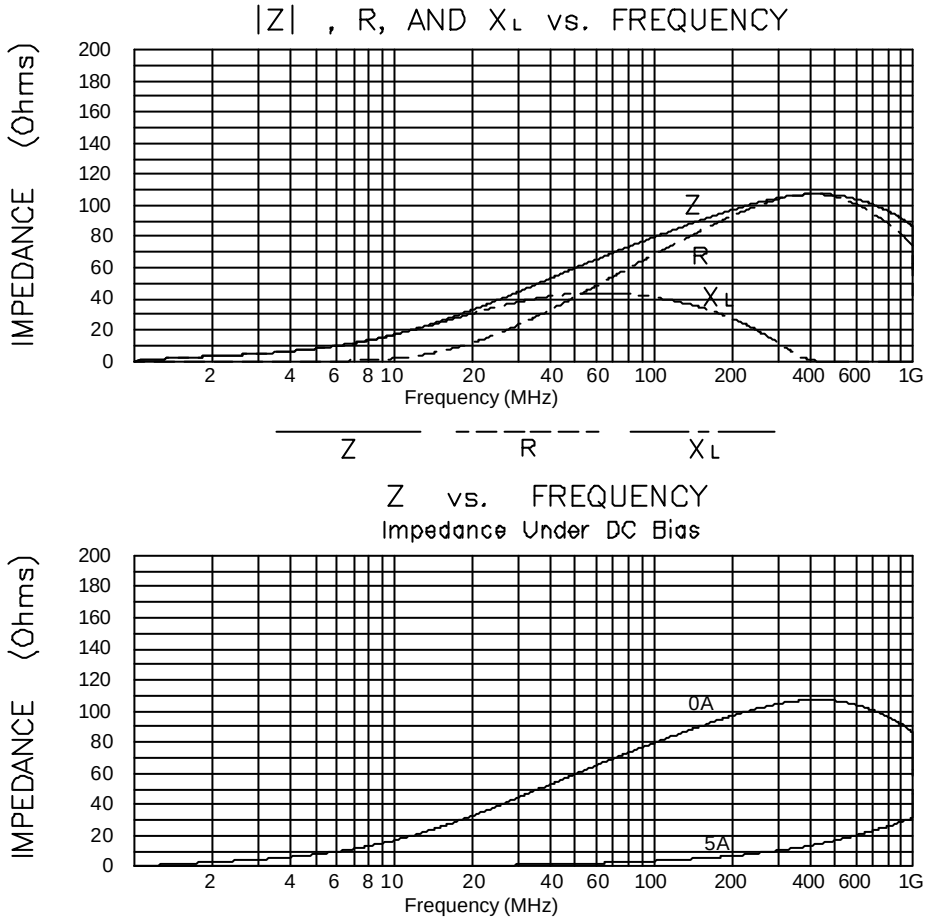


UNCONTROLLED DOCUMENT

BCCB-2012ES-800Q

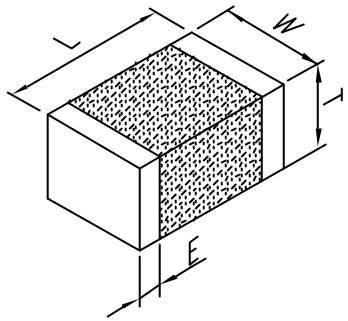
ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	80		
Minimum	60		
Maximum	100	0.02	3000mA



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

OSC level : 250 mV



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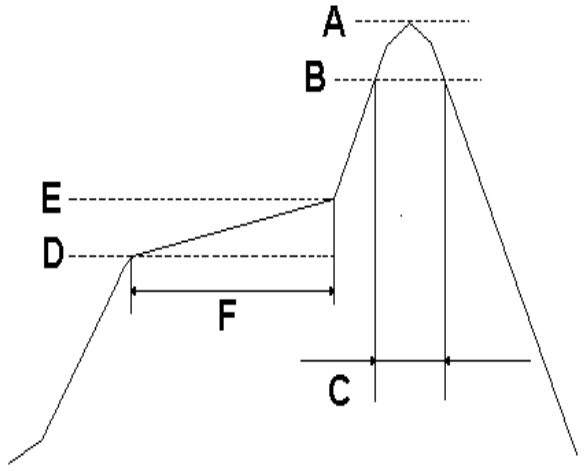
C	*5~10 sec*
D	*150°C*
E	*180°C*
F	*90 ± 30sec*

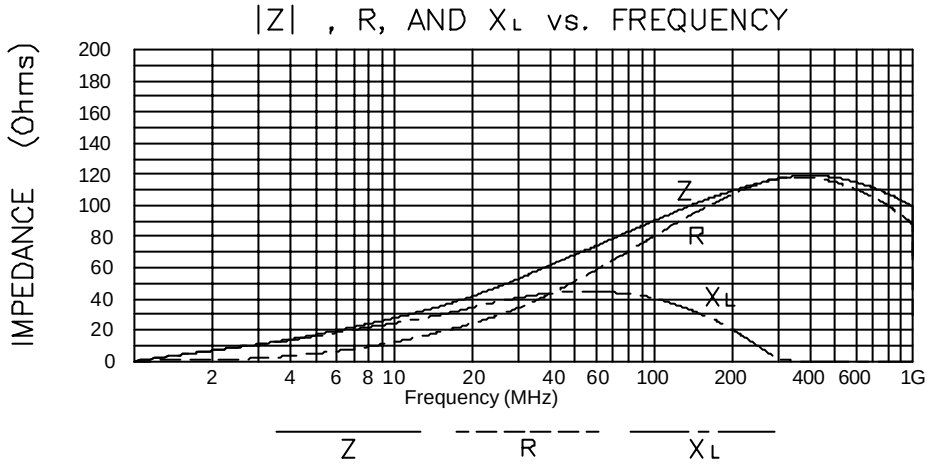


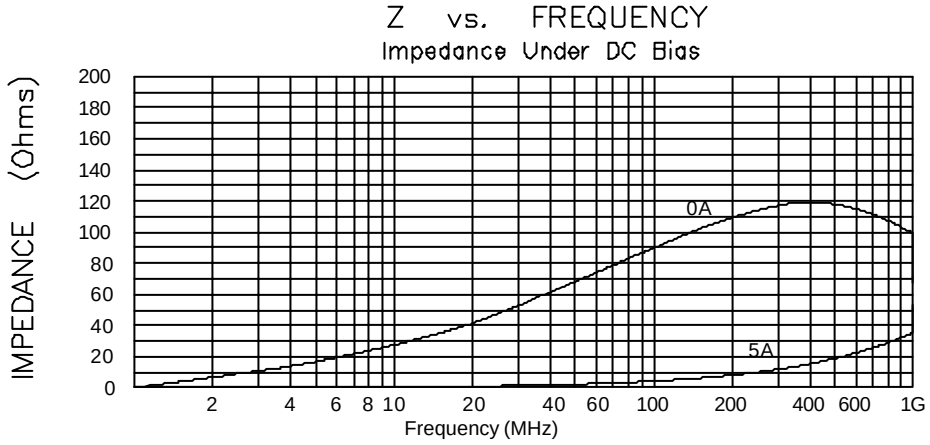
UNCONTROLLED DOCUMENT

BCCB-2012ES-900U

ELECTRICAL CHARACTERISTICS:

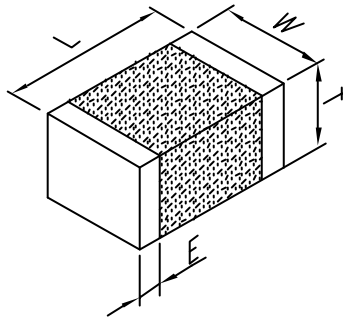
	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	90		
Minimum	67.5		
Maximum	112.5	0.02	5000mA





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

OSC level : 250 mV



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W 1.25(0.049) ±0.200(0.008)
T 0.90(0.035) ±0.200(0.008)
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Recommended Soldering Conditions

(REFLOW TEMPERATURE PR(

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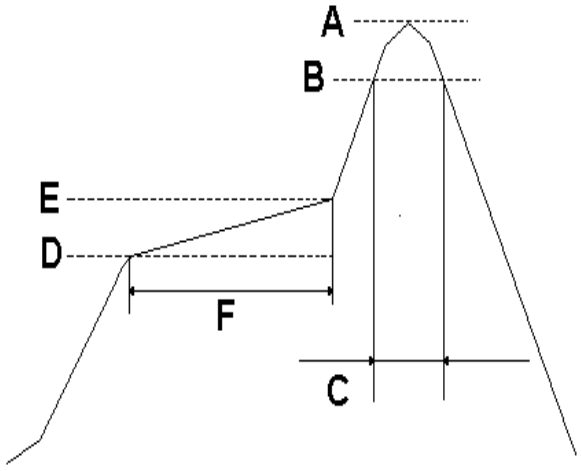
B	*230°C*
C	*5~10 sec*
D	*150°C*
E	*180°C*
F	*90 ± 30sec*

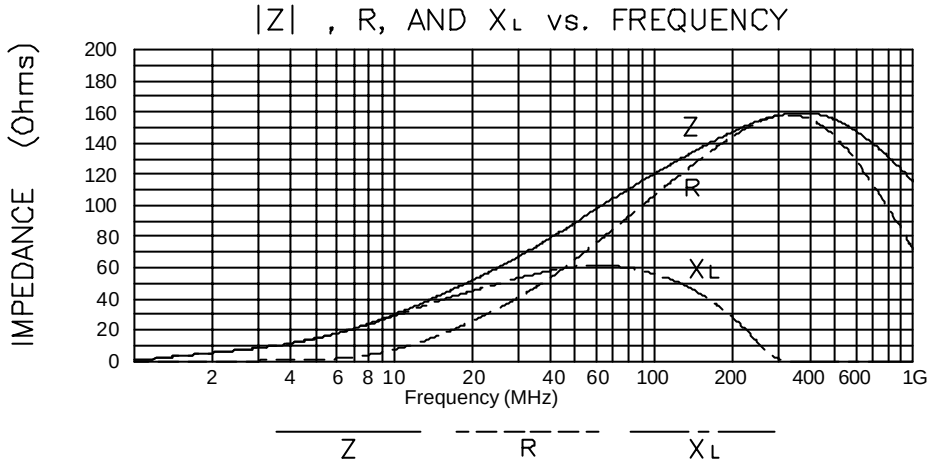


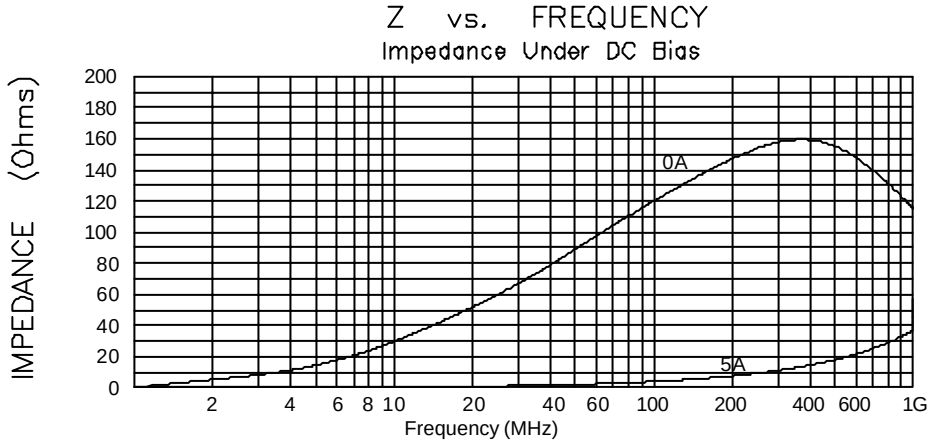
UNCONTROLLED DOCUMENT

BCCB-2012ES-121U

ELECTRICAL CHARACTERISTICS:

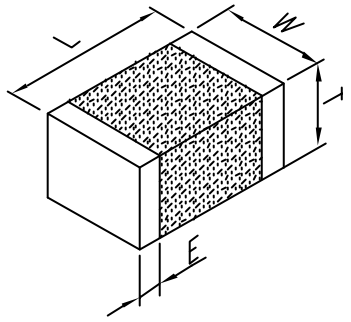
	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	120		
Minimum	90		
Maximum	150	0.02	5000mA





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

OSC level : 250 mV



PHYSICAL DIMENSIONS:

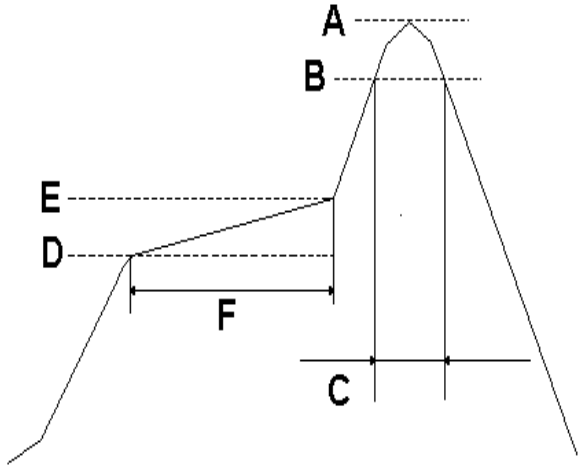
L 2.00(0.079) ±0.200(0.008)
W 1.25(0.049) ±0.200(0.008)
T 0.90(0.035) ±0.200(0.008)
E 0.50(0.020) ±0.300(0.012)

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 PR(

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

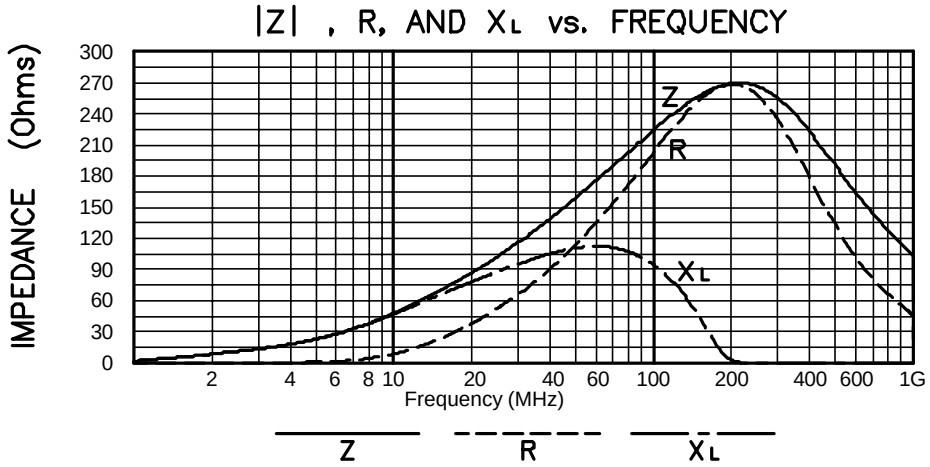


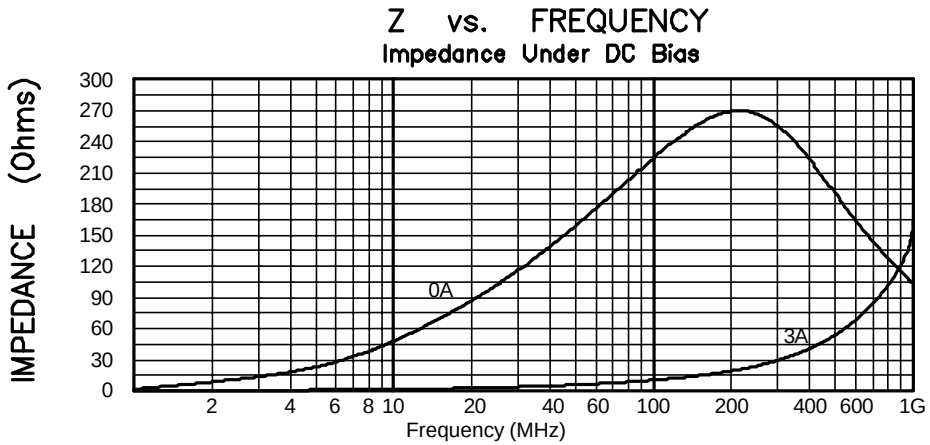
UNCONTROLLED DOCUMENT

BCCB-2012ES-221Q

ELECTRICAL CHARACTERISTICS:

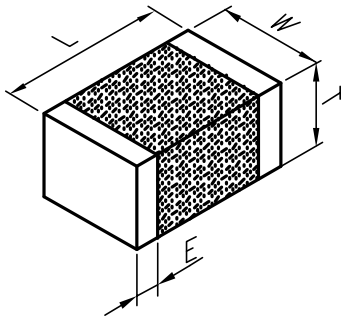
	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	220		
Minimum	165		
Maximum	275	0.04	3000mA





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

OSC level : 250 mV



PHYSICAL DIMENSIONS:

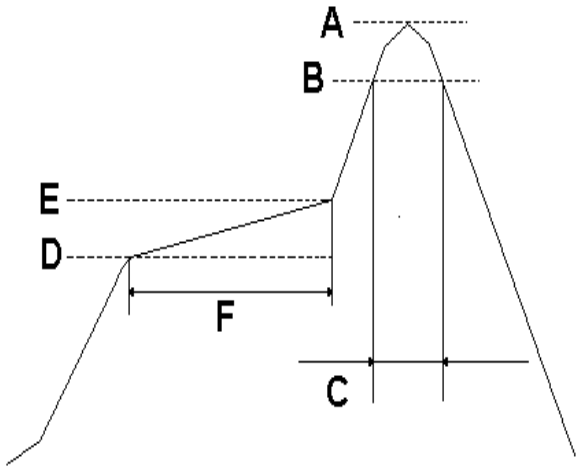
L 2.00(0.079) ±0.200(0.008)
W 1.25(0.049) ±0.200(0.008)
T 0.90(0.035) ±0.200(0.008)
E 0.50(0.020) ±0.300(0.012)

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 PR(

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

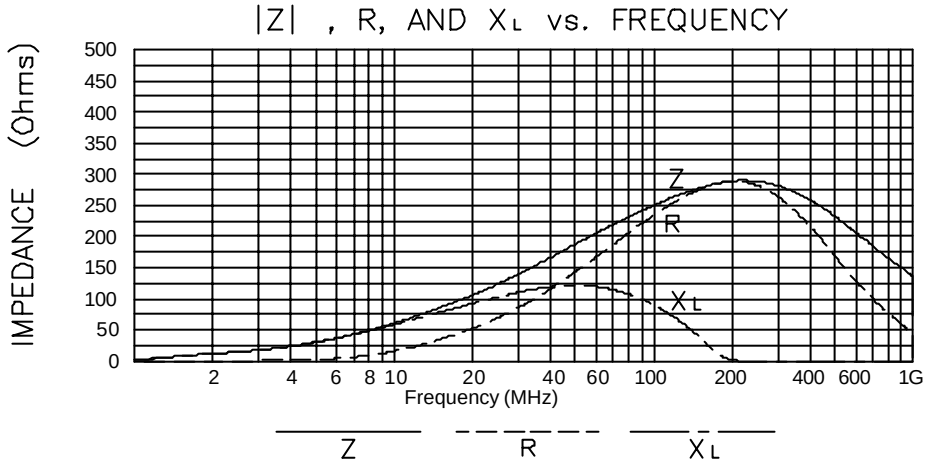


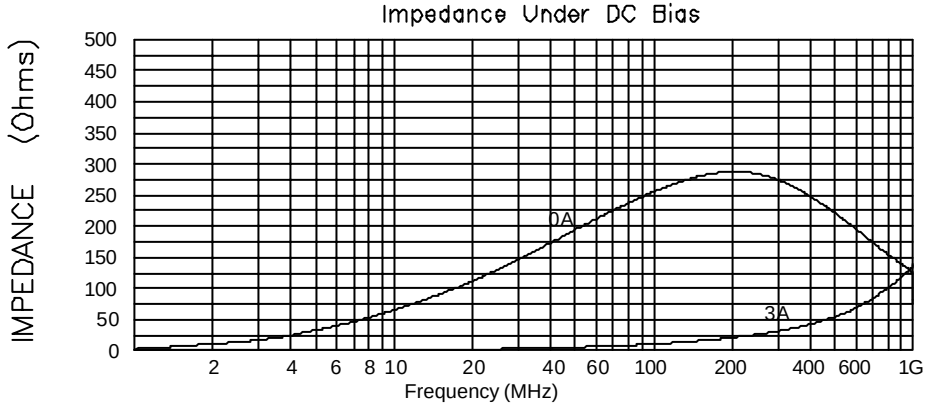
UNCONTROLLED DOCUMENT

BCCB-2012ES-251Q

ELECTRICAL CHARACTERISTICS:

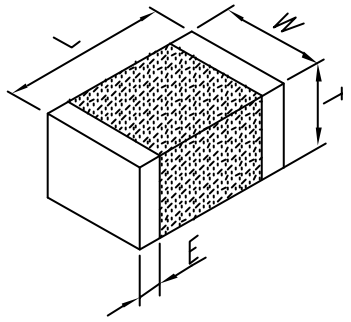
	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	250		
Minimum	187.5		
Maximum	312.5	0.04	3000mA





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

OSC level : 250 mV



PHYSICAL DIMENSIONS:

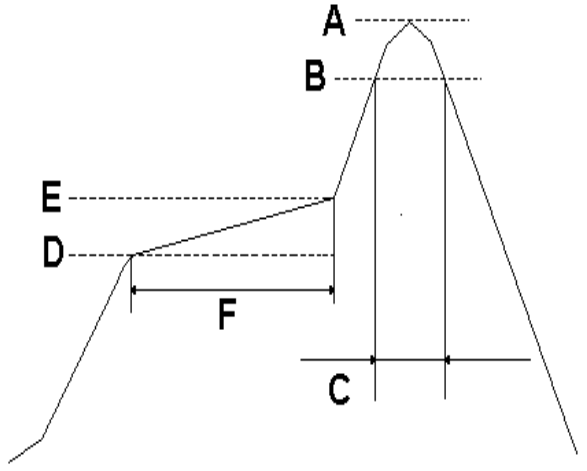
L 2.00(0.079) ±0.200(0.008)
W 1.25(0.049) ±0.200(0.008)
T 0.90(0.035) ±0.200(0.008)
E 0.50(0.020) ±0.300(0.012)

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 PR(

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

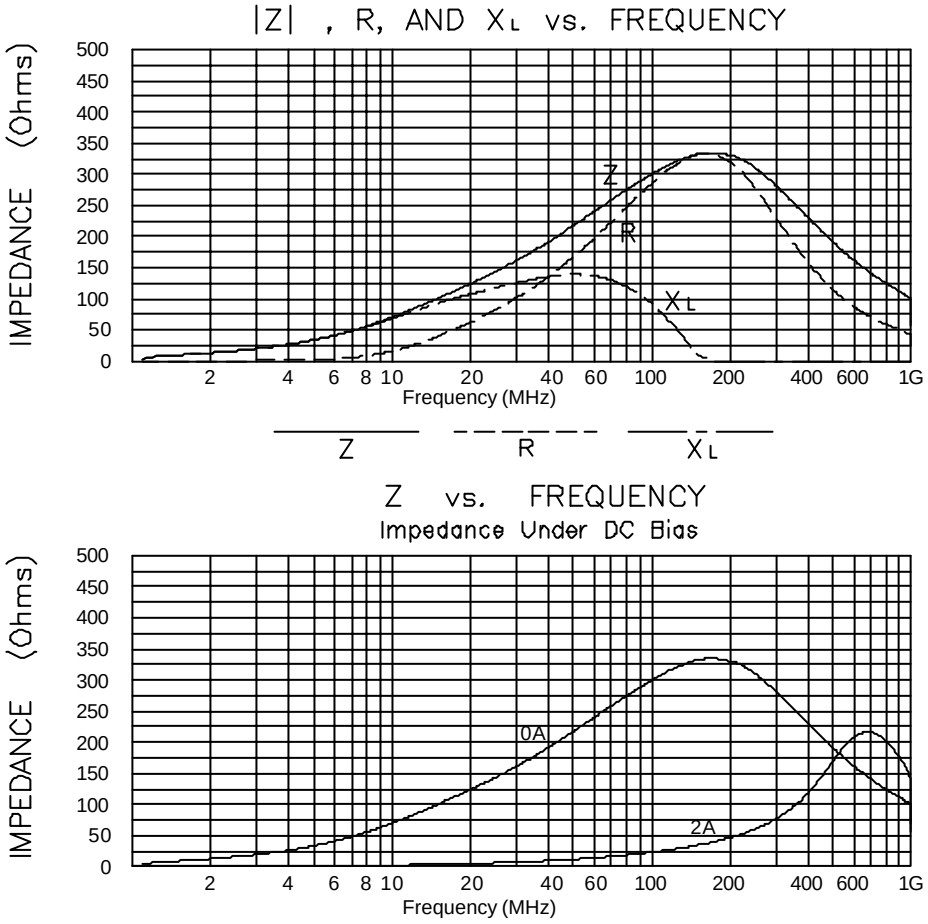


UNCONTROLLED DOCUMENT

BCCB-2012ES-301N

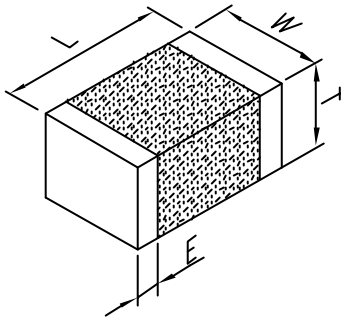
ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	300		
Minimum	225		
Maximum	375	0.09	2000mA



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

OSC level : 250 mV



PHYSICAL DIMENSIONS:

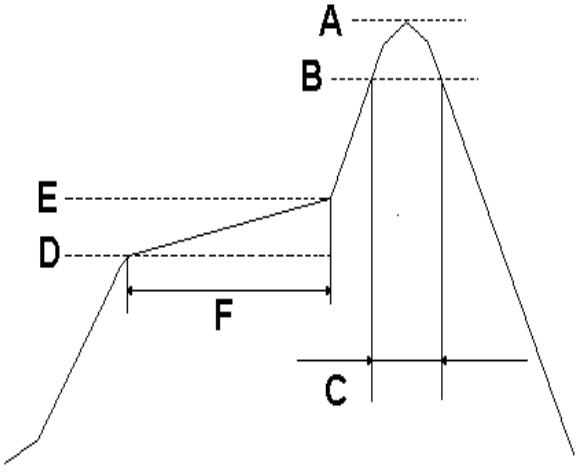
L 2.00(0.079) ±0.200(0.008)
W 1.25(0.049) ±0.200(0.008)
T 0.90(0.035) ±0.200(0.008)
E 0.50(0.020) ±0.300(0.012)

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 PR

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

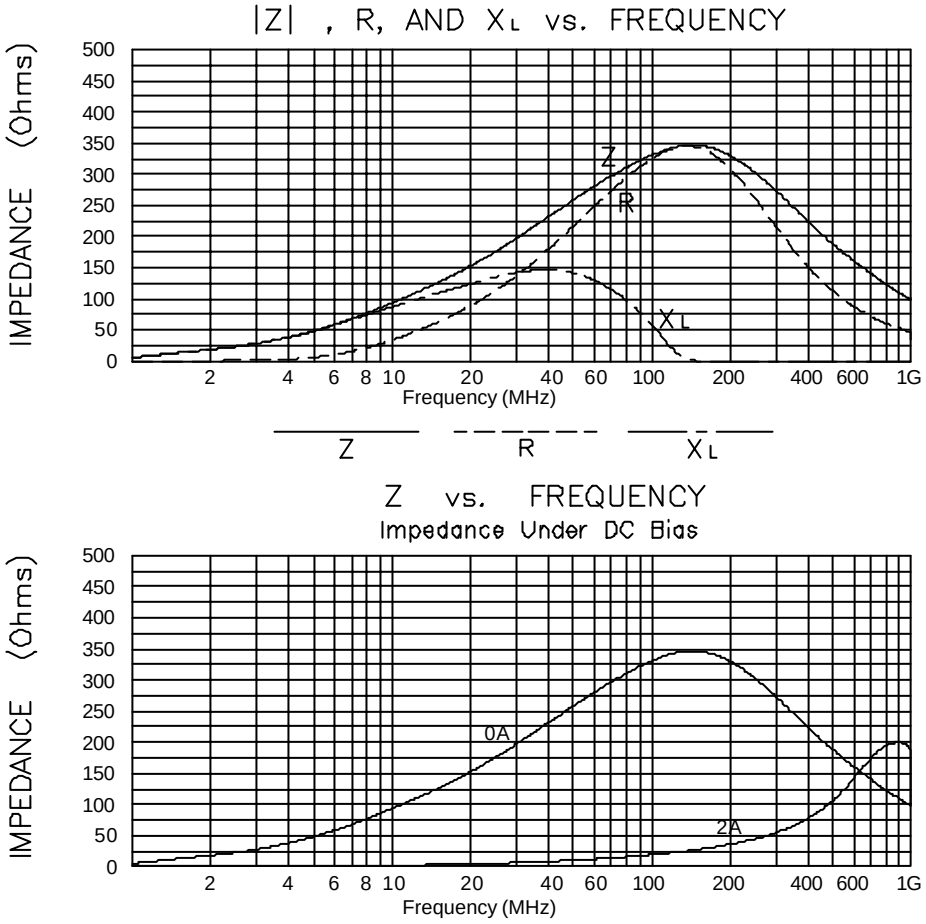


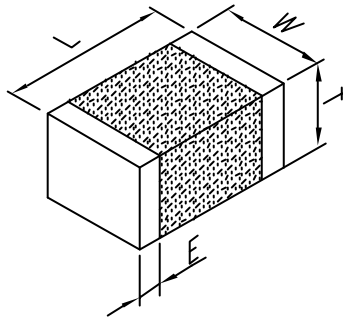
UNCONTROLLED DOCUMENT

BCCB-2012ES-331N

ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	330		
Minimum	247.5		
Maximum	412.5	0.09	2000mA





PHYSICAL DIMENSIONS:

L 2.00(0.079) ±0.200(0.008)

W 1.25(0.049) ±0.200(0.008)

T 0.90(0.035) ±0.200(0.008)

E 0.50(0.020) ±0.300(0.012)

NOTES: UNLESS OTHERWISE SPECIFIED

1.-All edges and corners must be rounded.

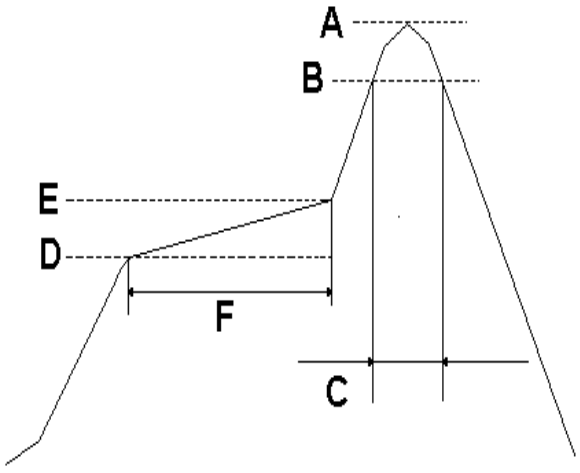
2.-Dimensions are in millimeters (inches)

3.-Taped and Reeled per current EIA specification.

Recommended Soldering Conditions

(REFLOW TEMPERATURE PR(

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

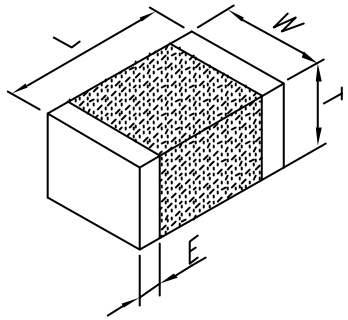
OSC level : 250 mV

UNCONTROLLED DOCUMENT

BCCB-2012ES-601N

ELECTRICAL CHARACTERISTICS:

	Z @ 100MHz (Ohms)	DCR (Ohms)	Rated Current
Nominal	600		
Minimum	450		
Maximum	750	0.09	2000mA



PHYSICAL DIMENSIONS:

L 2.00(0.079) ±0.200(0.008)

W 1.25(0.049) ±0.200(0.008)

T 0.90(0.035) ±0.200(0.008)

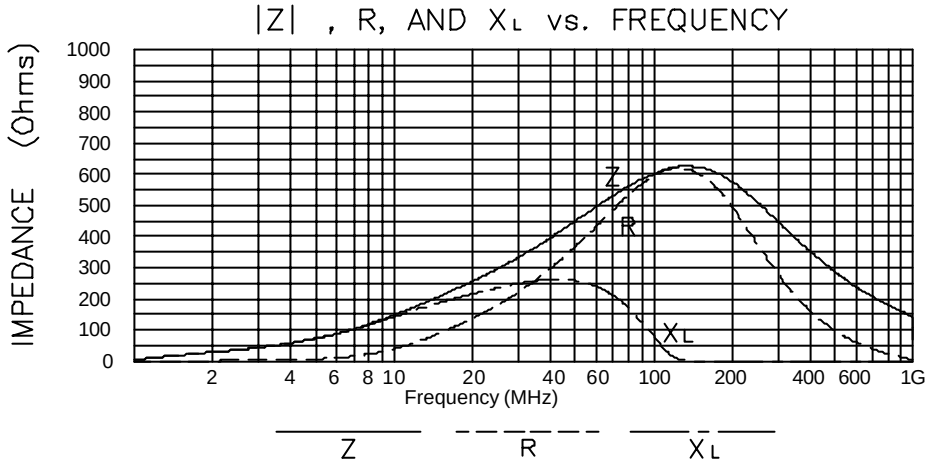
E 0.50(0.020) ±0.300(0.012)

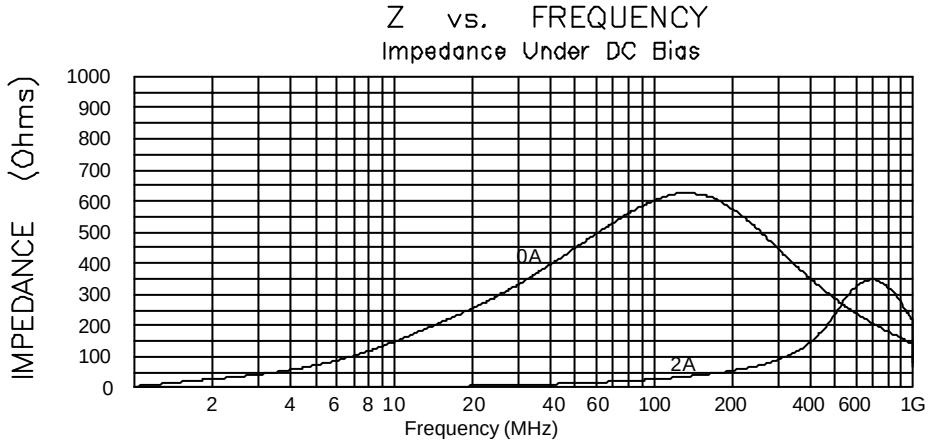
NOTES: UNLESS OTHERWISE SPECIFIED

1.-All edges and corners must be rounded.

2.-Dimensions are in millimeters (inches)

3.-Taped and Reeled per current EIA specification.

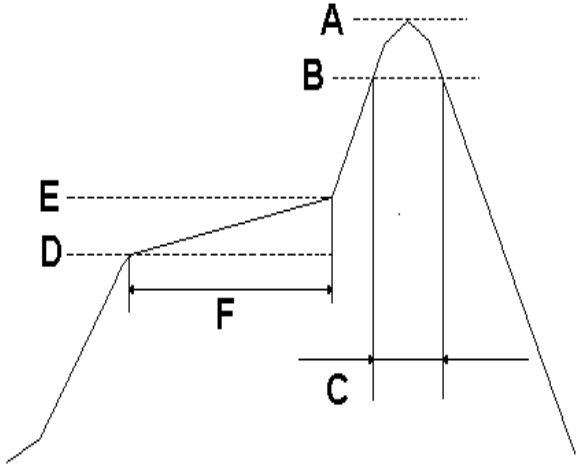




Recommended Soldering Conditions

(REFLOW TEMPERATURE PR(

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