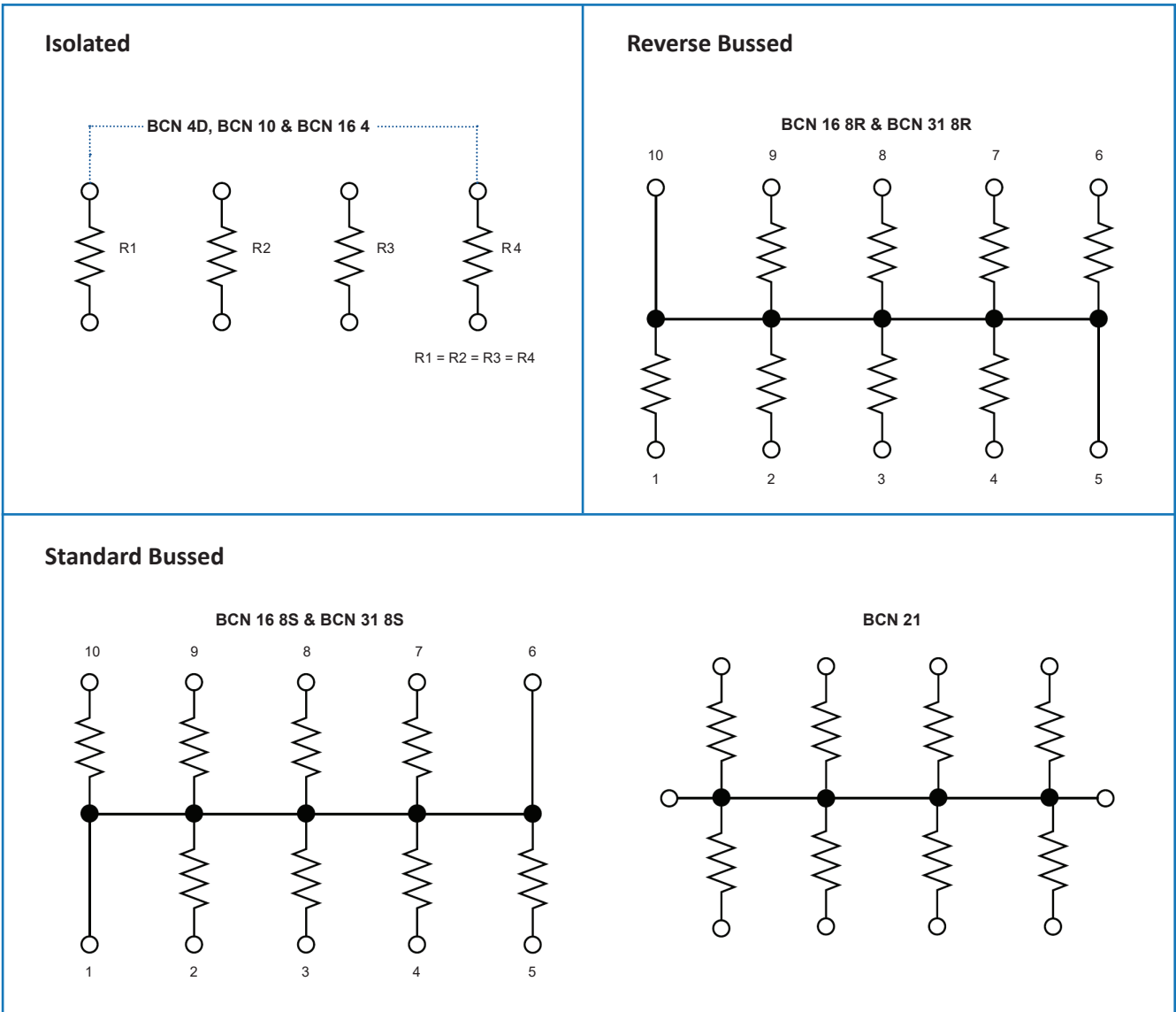


Circuits



Environmental Data

Test	Condition	$\Delta R\%$ (+0.1 Ω)	
		$\pm 200\text{ppm}/^{\circ}\text{C}$ TCR	$\pm 100\text{ppm}/^{\circ}\text{C}$ TCR
Load life	1000 hrs cyclic load @ 70 $^{\circ}\text{C}$	3	1
Short term overload	2.5 x rated voltage for 5s	2	0.25
High temperature operation	1000 hrs @ 155 $^{\circ}\text{C}$	3	1
Temperature cycling	5 cycles, -55 to +155 $^{\circ}\text{C}$	1	1
Moisture resistance	1000 hrs @ 40 $^{\circ}\text{C}$, 95% RH	3	1
Resistance to solder heat	260 $^{\circ}\text{C}$ for 10s	1	0.25
Sulphur resistance ¹	1000 hrs @ 50 $^{\circ}\text{C}$, 92% RH, 3-5ppm H ₂ S	0.5	0.5

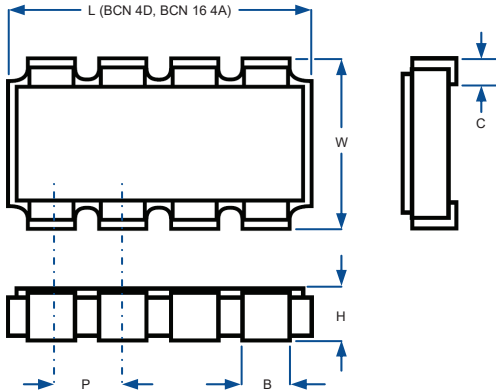
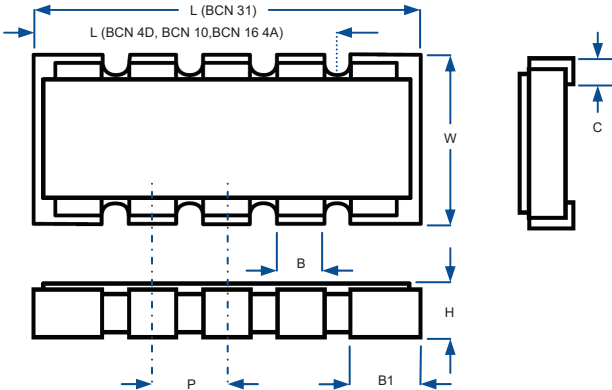
Note 1 – Anti-sulphur construction only

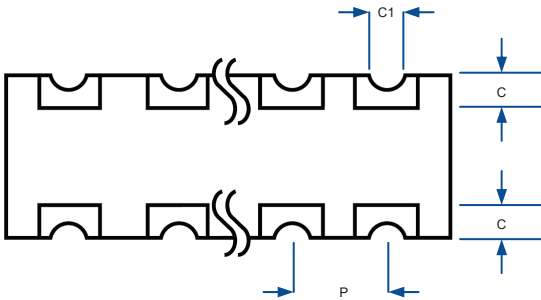
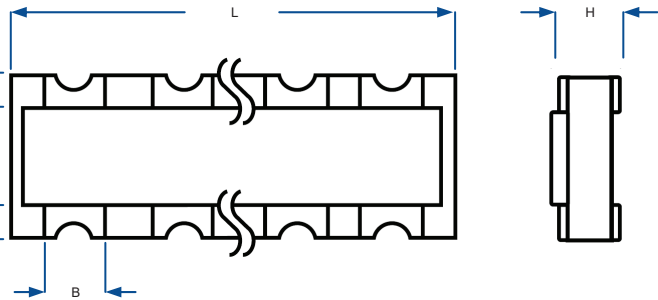
General Note
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BI Technologies IRC Welwyn

www.ttelectronics.com/resistors

Physical Data (Inch /mm)

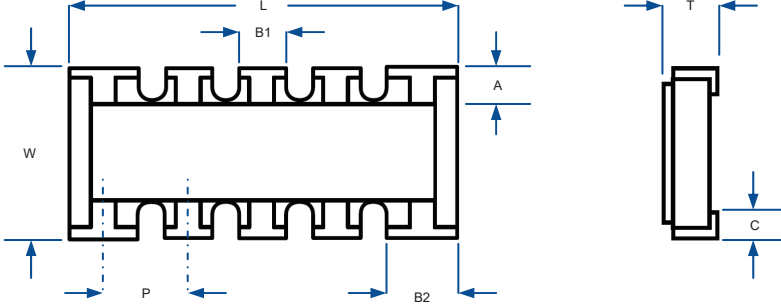
Scalloped Edge: Models BCN 4D, 16 4A				Exterior Termination (Convex) Square Edge: Models BCN 16 4AB, 31			
							
	L	W	H	P	B	B1	C
BCN 4D	.210 ±.008	.122 ±.008	.022 ±.004	.050 ±.008	.030 ±.008	-	.012 ±.008
	5.34 ±0.20	3.10 ±0.20	0.55±0.10	1.27±0.20	0.80 ±0.20	-	0.30 ±0.20
BCN 10	.079 ±.004	.039 ±.004	.018 ±.004	.020 ±.002	.012 ±.002	.016±.002	.012±.006
	2.00 ±0.10	1.00 ±0.10	0.45 ±0.10	0.50 ±0.05	0.30 ±0.05	0.40 ±0.05	0.3 ±0.15
BCN 16 4A/ AB	.126 ±.004	.063 ±.004	.020 ±.004	.031 ±.002	.020 ±.004	-	.009 ±.005
	3.20 ±0.10	1.60 ±0.10	0.50 ±0.10	0.80 ±0.05	0.50 ±0.10	-	0.229 ±0.125
BCN 31	.252 ±.008	.122+-.012,-.008	.022 ±.004	.050 ±.002	.032 ±.004	.041±.004	.012 ±.004
	6.40 ±0.20	3.1 ±0.3, -0.2	0.55 ±0.10	1.27 ±0.051	0.80 ±0.10	1.05±0.10	0.30 ±0.10

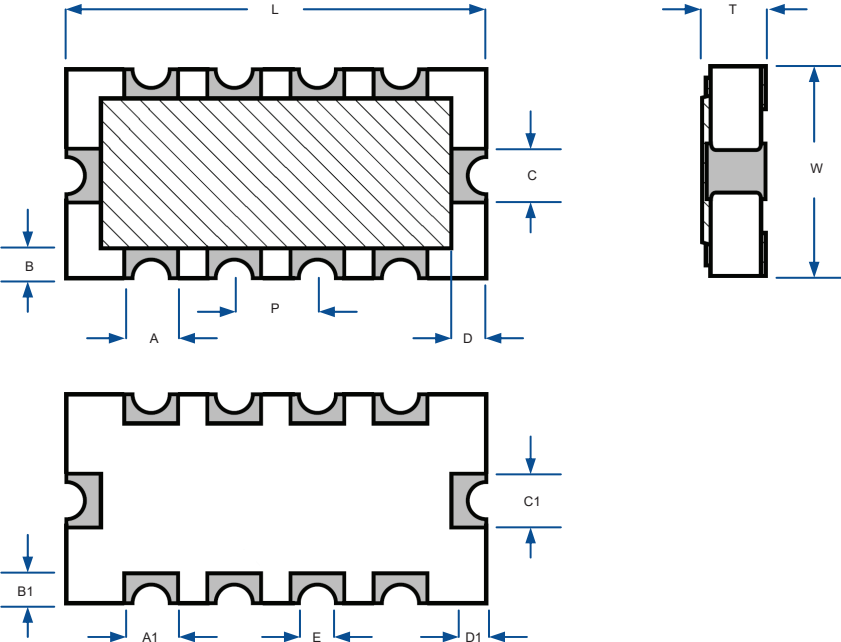
Interior Termination (Concave) Square Edge: Models BCN 4 DBI, 16 4ABI, 31							
							
	L	W	H	P	B	C	C1
BCN 4 DBI	.210 ±.008	.122 ±.008	.022 ±.004	.050 ±.008	.030 ±.008	.012 ±.008	-
	5.34 ±0.20	3.10 ±0.20	0.55 ±0.10	1.27 ±0.20	0.80 ±0.20	0.30 ±0.20	-
BCN 16 4ABI	.126 ±.008	.063 ±.006	.024 ±.004	.031 ±.004	.016 ±.006	.012 ±.008	.012 ±.008
	3.20 ±0.20	1.60 ±0.15	0.60 ±0.10	0.80 ±0.10	0.40 ±0.15	0.30 ±0.20	0.30 ±0.20
BCN 31	.252 ±.008	.122 ±.008	.024 ±.004	.050	.028 ±.008	.012	.012 ^{+.008} _{-.004}
	6.40 ±0.20	3.10 ±0.20	0.60 ±0.10	1.27	0.70 ±0.20	0.30	0.30 ^{+.02} _{-.01}

General Note

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Physical Data (Inch /mm)

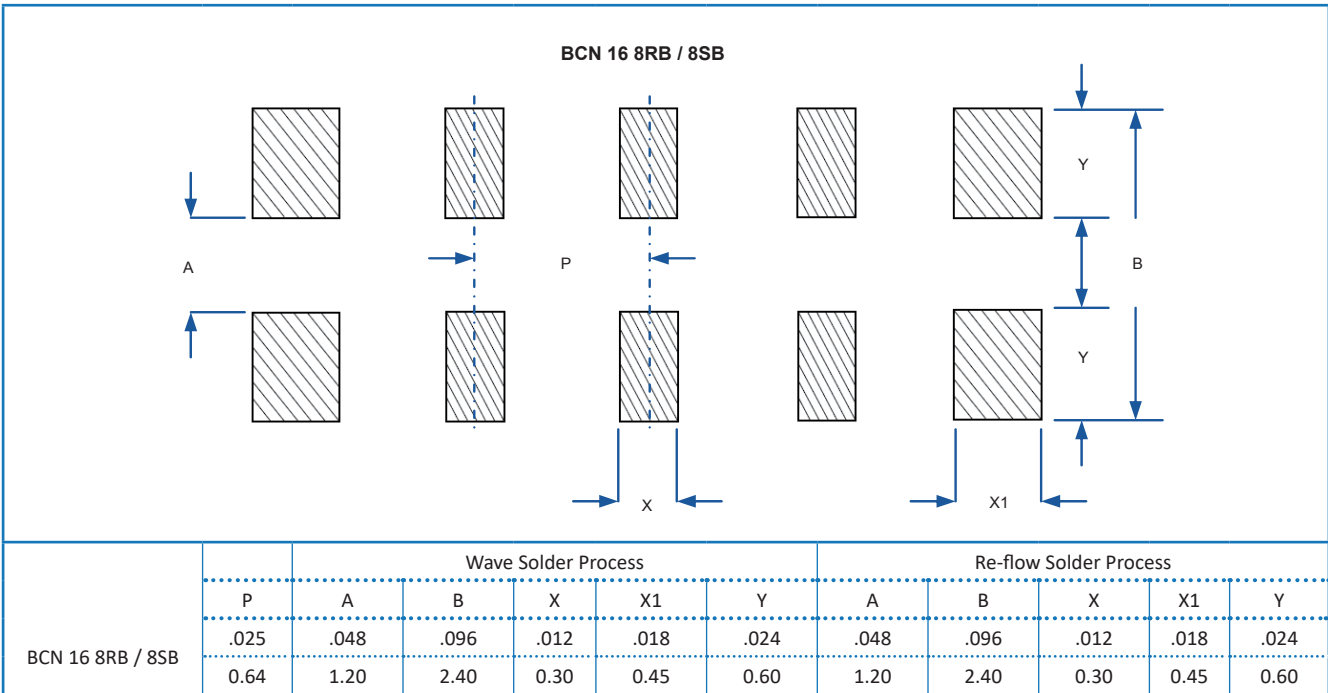
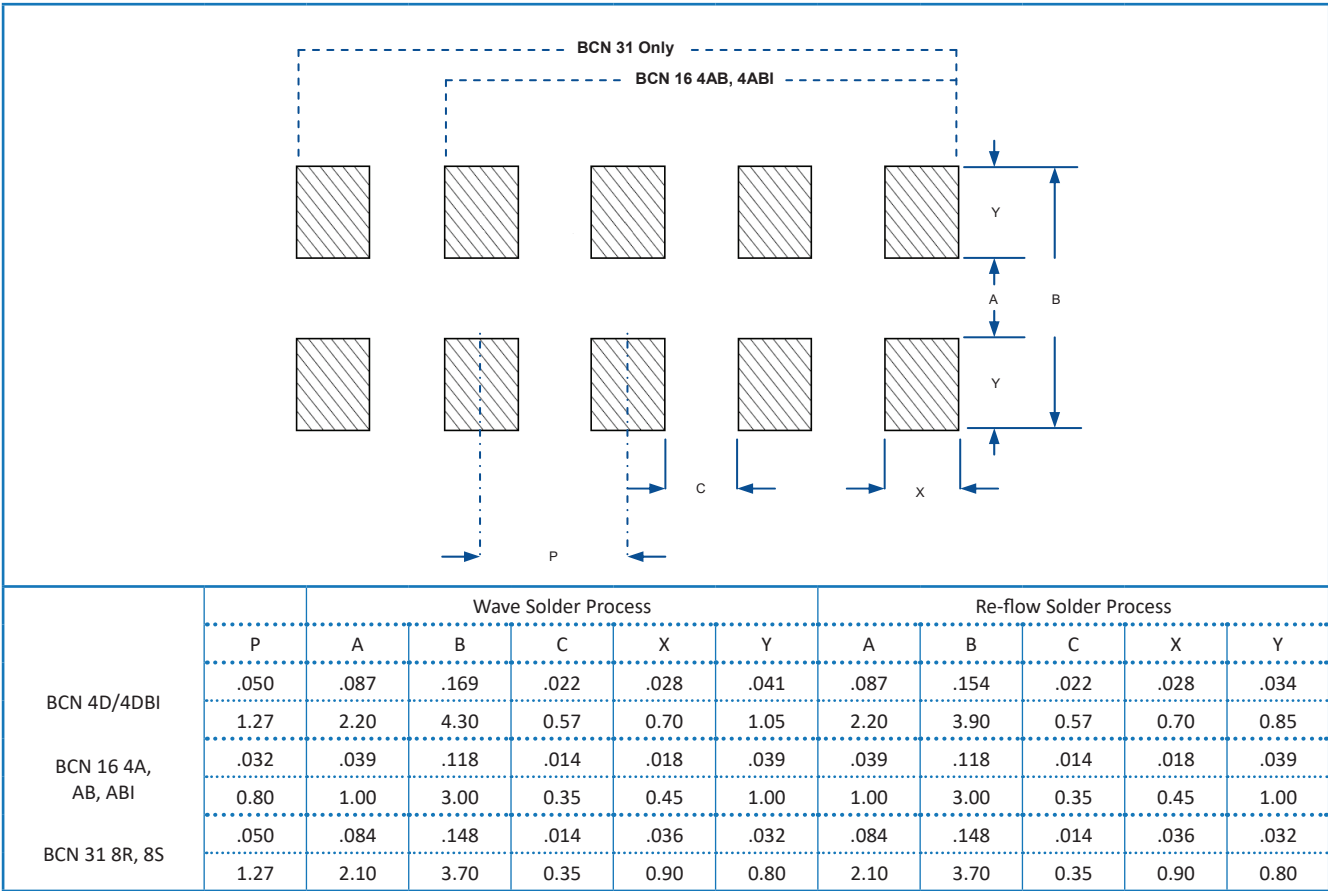
Exterior Termination (Convex) Square Edge: Models BCN 16 8R, 8S 							
L	W	T	A	B1	B2	C	P
.126 ±.008	.063 ±.008	.020 ±.004	.012 ±.006	.014 ±.006	.020 ±.006	.008	.025
3.20 ±0.20	1.60 ±0.20	0.50 ±0.10	0.30 ±0.15	0.36 ±0.15	0.50 ±0.15	0.20	0.64

Interior Termination (Concave) Square Edge: Models BCN 21 						
L	W	T	A	B	C	D
.157 ±.008	.083 ±.008	.021 ±.004	.020 ±.008	.010 ±.008	.020 ±.008	.012 ±.008
4.00 ±0.20	2.10 ±0.20	0.55 ±0.10	0.50 ±0.20	0.25 ±0.20	0.50 ±0.20	0.30 ±0.20
A1	B1	C1	D1	E	P	
.016 ±.008	.014 ±.008	.020 ±.008	.014 ±.008	.012	Typ.	
0.40 ±0.20	0.40 ±0.20	0.50 ±0.20	0.35 ±0.20	0.30	Typ.	

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Solder pad layout (Inch / mm)



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Solder pad layout (Inch / mm)

BCN 10

The diagram illustrates the BCN 10 layout, which consists of two rows of four rectangular pads each. The top row is labeled 'A' on the left and 'B' on the right. The bottom row is labeled 'X' and 'X1' below the pads. Dimensions are indicated by arrows: 'L' is the total length of the top row; 'P' is the pitch between the first two pads; 'P1' is the pitch between the second and third pads; 'A' is the height of the pads in the top row; 'B' is the height of the pads in the bottom row; 'X' is the width of the pads in the bottom row; 'X1' is the width of the pads in the bottom row; and 'Y' is the height of the pads in the top row.

BCN 10

P	P1	A	B	X	X1	Y	L
.024	.020	.020 ±.004	.060 ±.004	010 ±.004	.018 ±.004	.020 ±.004	.085 ±.004
0.60	0.50	0.50 ±0.10	1.50 ±0.10	0.25 ±0.15	0.45 ±0.10	0.50 ±0.10	2.15 ±0.10

BCN 21

The diagram illustrates the BCN 21 layout, which consists of two rows of four rectangular pads each. The top row is labeled 'A' and 'B' on the right. The bottom row is labeled 'C', 'X', and 'Y' below the pads. Dimensions are indicated by arrows: 'L' is the total length of the top row; 'A' is the height of the pads in the top row; 'B' is the height of the pads in the bottom row; 'C' is the height of the pads in the bottom row; 'X' is the width of the pads in the bottom row; 'Y' is the height of the pads in the bottom row; 'W' is the width of the pads in the bottom row; 'W1' is the width of the pads in the bottom row; 'W2' is the width of the pads in the bottom row; and 'W3' is the width of the pads in the bottom row.

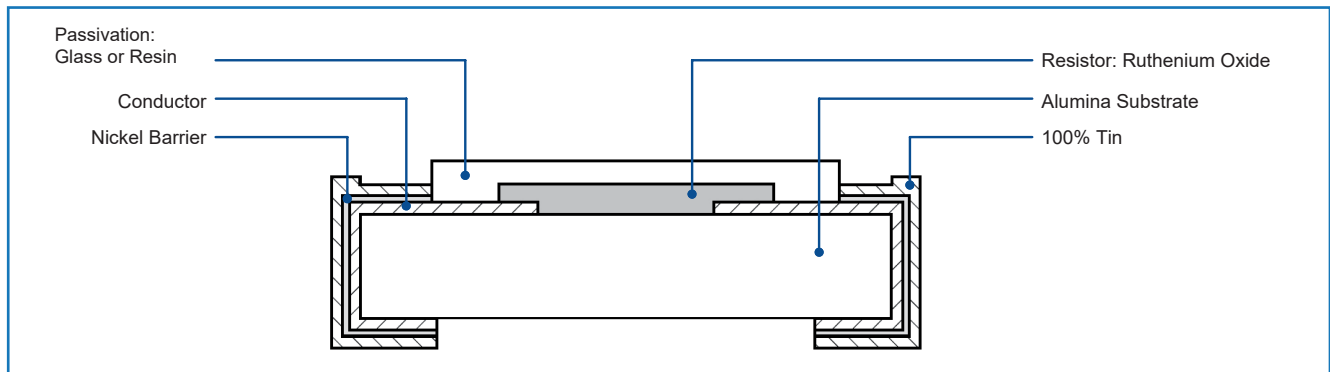
BCN 21

P	A	B	C	X	Y	W	W1	W2	W3	L
.032	.060 ±.008	.120 ±.008	.016 ±.004	.016 ±.004	.030 ±.004	.012 ±.001	.015 ±.004	.030 ±.004	.030 ±.004	.196 ±.008
0.80	1.20 ±0.20	3.00 ±0.20	0.40 ±0.10	0.40 ±0.10	0.75 ±0.10	0.31 ±0.02	0.38 ±0.10	0.75 ±0.10	0.75 ±0.10	4.98 ±0.20

General Note

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Construction



Ordering Procedure

Example: BCN164ABZ102J7S (BCN 1.6mm wide, 4 resistors, isolated circuit, square edge, convex terminations with TCR $\pm 100\text{ppm}/^\circ\text{C}$ at 1 kilohm $\pm 5\%$, on a 7" reel, anti-sulphur construction, Pb-free).

B	C	N	1	6	4	A	B	Z	1	0	2	J	7	S
1	2	3	4	5	6	7	8	9	10	11				

1	2	3	4	5	6	7	8	9	10	11
Series	Width	Number of Resistors	Circuit	Edge	Termination	TCR (ppm/°C)	Value	Tolerance	Packaging	Construction
BCN	Blank= 3.1mm	4	A=Isolated	Blank= Scalloped	Blank= External (convex)	Blank= ± 200	3 digits for E24 at 2% or 5%	F= $\pm 1\%$ G= $\pm 2\%$	7=7" reel 13=13" reel	Blank= Standard
	10=1.0mm	8	S=Standard bussed	B=Square	I=Internal (concave)	Z= ± 100	4 digits for uniquely E96 and for all values at 1%	J= $\pm 5\%$ (Blank for jumper)		S=Anti-sulphur
	16=1.6mm		R=Reverse bussed							
	21=2.1mm									
	31=3.1mm									
							JP=Jumper			

Valid Combinations (1 – 6)	Valid Options (7, 8 & 11)	Packaging Quantity & Tape (10)
B C N 1 0 4 A B	JP=Jumper, S=Anti-sulphur	7=10,000/reel, 13=40,000/reel, Paper tape
B C N 1 6 4 A	Z= $\pm 100\text{ppm}/^\circ\text{C}$, JP=Jumper, S=Anti-sulphur	7=5000/reel, 13=20,000/reel, Paper tape
B C N 1 6 4 A B	Z= $\pm 100\text{ppm}/^\circ\text{C}$, JP=Jumper, S=Anti-sulphur	
B C N 1 6 4 A B I	JP=Jumper	
B C N 1 6 8 S B		
B C N 1 6 8 R B	S=Anti-sulphur	
B C N 2 1 8 S B I		7=4000/reel, 13=16,000/reel, Plastic tape
B C N 4 4 D	JP=Jumper, S=Anti-sulphur	
B C N 4 4 D B I	JP=Jumper	
B C N 3 1 8 S B		
B C N 3 1 8 R B		
B C N 3 1 8 S B I		
B C N 3 1 8 R B I		