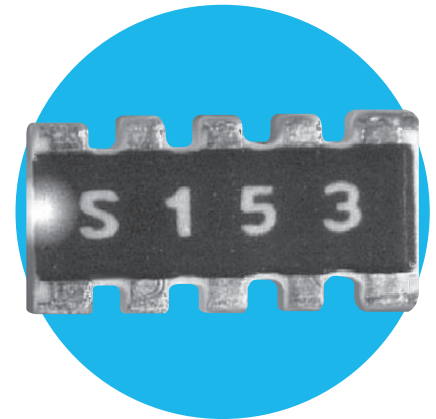


Thick Film Chip Arrays

BCN Series

- Sulphur resistant version available (Tested to ASTM-B809)
- AEC-Q200 (BCN10, BCN164AB and BCN4D)
- Concave and convex versions
- Isolated and bussed versions



All parts are Pb-free and comply with EU Directive 2011/65/EU amended by (EU) 2015/863 (RoHS3)

Summary of Types

Type	Part Number Start	Width (mm)	Resistor Elements	Circuit	Package Size	Scalloped Convex	Square Convex	Square Concave	
BCN10	BCN104AB	1.0	0402 x 4	Isolated	0804				
BCN164	BCN164A	1.6	0603 x 4			1206			
	BCN164AB								
	BCN164ABI								
BCN168	BCN168SB	2.1	0603 x 8	Bussed	1608				
	BCN168RB								
BCN21	BCN218SBI		0804 x 8	Isolated	2112				
BCN4D	BCN4D	3.1	1206 x 4						
	BCN4DBI								
BCN31	BCN318SB			1206 x 8	1206 x 8	Bussed ¹	2512		
	BCN318RB								
	BCN318SBI								
	BCN318RBI								

Note 1 – For R/2R ladder circuit see separate BCN31L datasheet

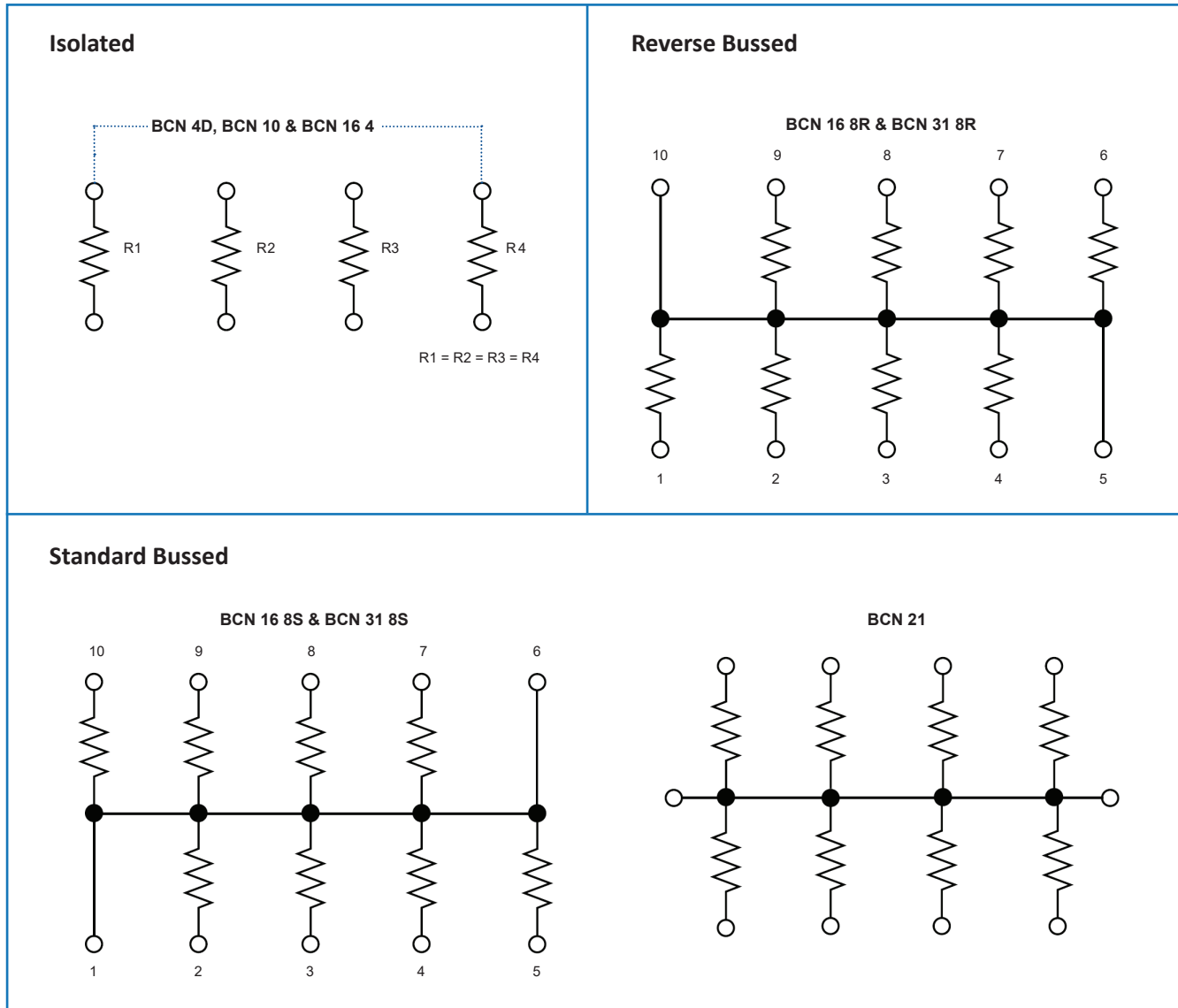
Electrical Data

		BCN10	BCN164A BCN164AB	BCN164ABI	BCN168	BCN21	BCN4D	BCN31
Resistor power rating @70°C	mW	63			32	63	125	63
Package power rating @70°C	mW	250					500	
Limiting element voltage	V	25	50		25		75	50
Maximum overload voltage	V	63	125		63		188	125
Resistance range	ohms	10R – 1M0			100R – 1M0	68R – 220K	10R – 1M0	22R – 1M0
Resistance tolerance	%	1, 5	1, 2, 5		5		1, 5	1, 2, 5
TCR	ppm/°C	±200	±100, ±200		±200			
Standard values		E24 preferred, E96 available						
Ambient temperature range	°C	-55 to +155						

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

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°C	3	1
Short term overload	2.5 x rated voltage for 5s	2	0.25
High temperature operation	1000 hrs @ 155°C	3	1
Temperature cycling	5 cycles, -55 to +155°C	1	1
Moisture resistance	1000 hrs @ 40°C, 95% RH	3	1
Resistance to solder heat	260°C for 10s	1	0.25
Sulphur resistance ¹	1000 hrs @ 50°C, 92% RH, 3-5ppm H ₂ S	0.5	0.5

Note 1 – Anti-sulphur construction only

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

Physical Data (Inch /mm)

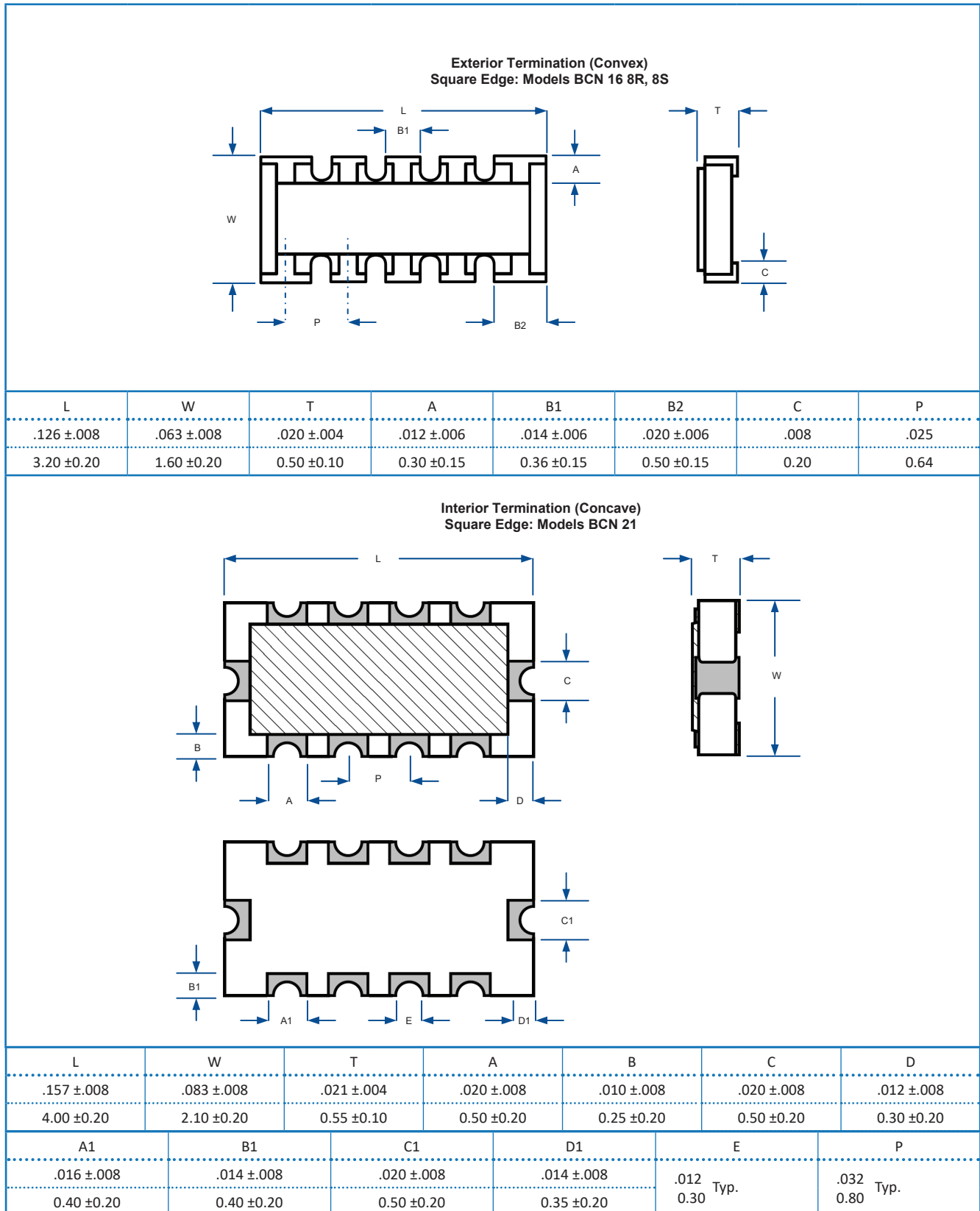
Scalloped Edge: Models BCN 4D, 16 4A		Exterior Termination (Convex) Square Edge: Models BCN 16 4AB, 31					
	L (BCN 4D, BCN 16 4A)	W	H	P	B	B1	C
BCN 4D	.210 ±.008	.122 ±.008	.022 ±.004	.050 ±.008	.030 ±.008	-	.012 ±.008
	5.34 ±0.20	3.10 ±0.20	0.55 ±0.10	1.27 ±0.20	0.80 ±0.20	-	0.30 ±0.20
BCN 10	.079 ±.004	.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 ±.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 ^{+0.008} _{-.004}
	6.40 ±0.20	3.10 ±0.20	0.60 ±0.10	1.27	0.70 ±0.20	0.30	0.30 ^{+0.02} _{-.01}

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

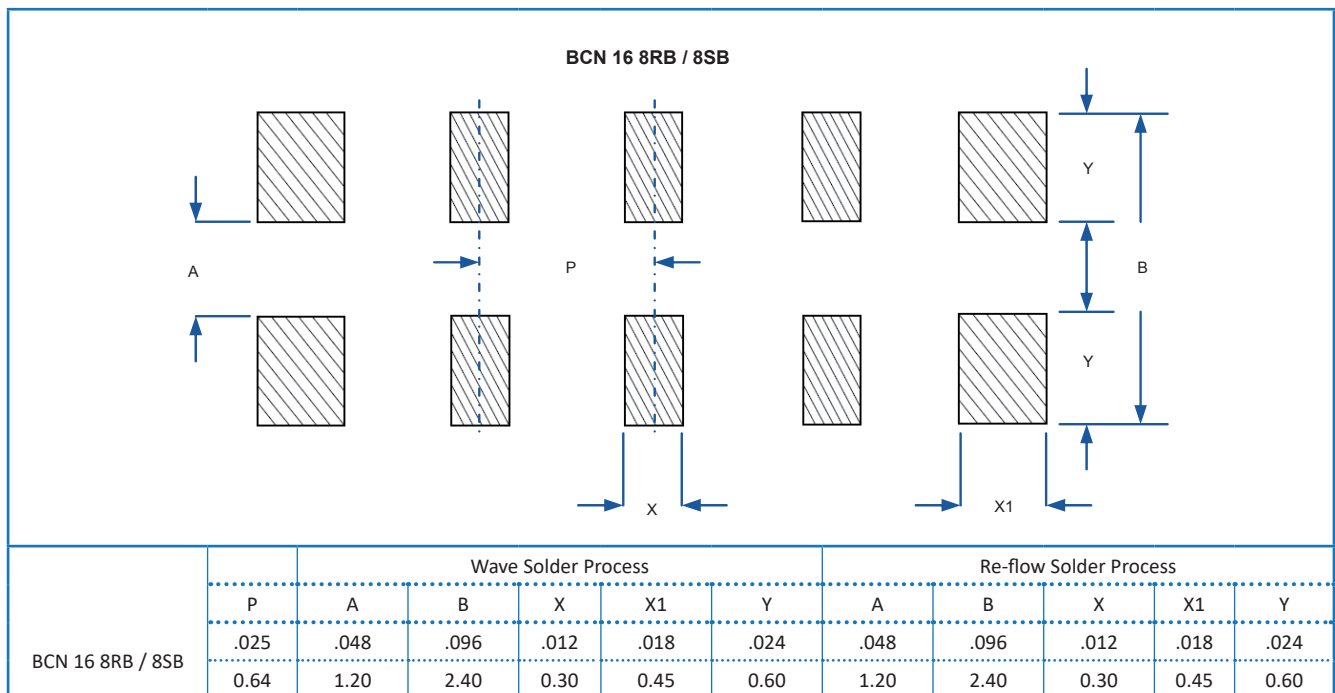
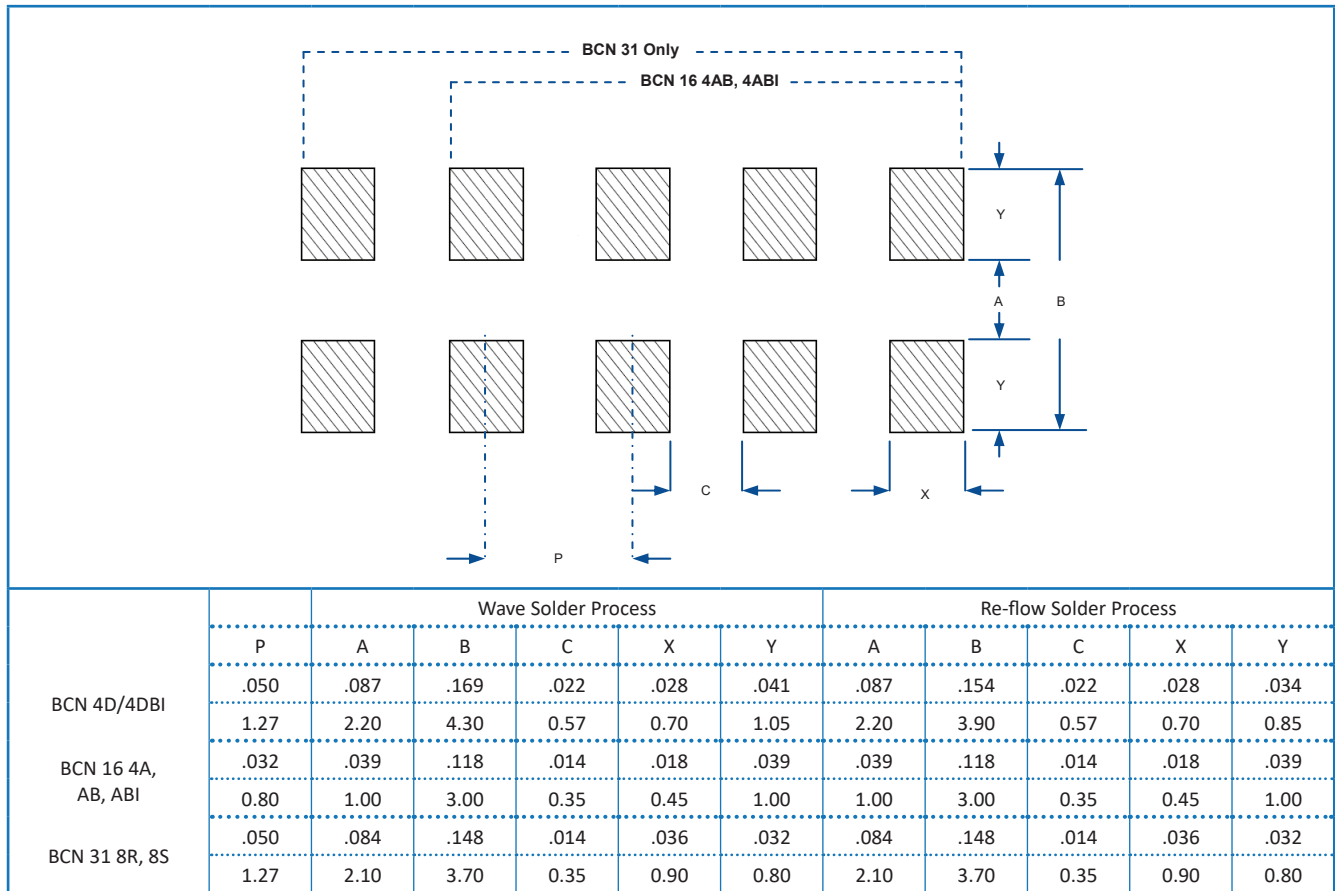
Physical Data (Inch /mm)



General Note

TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

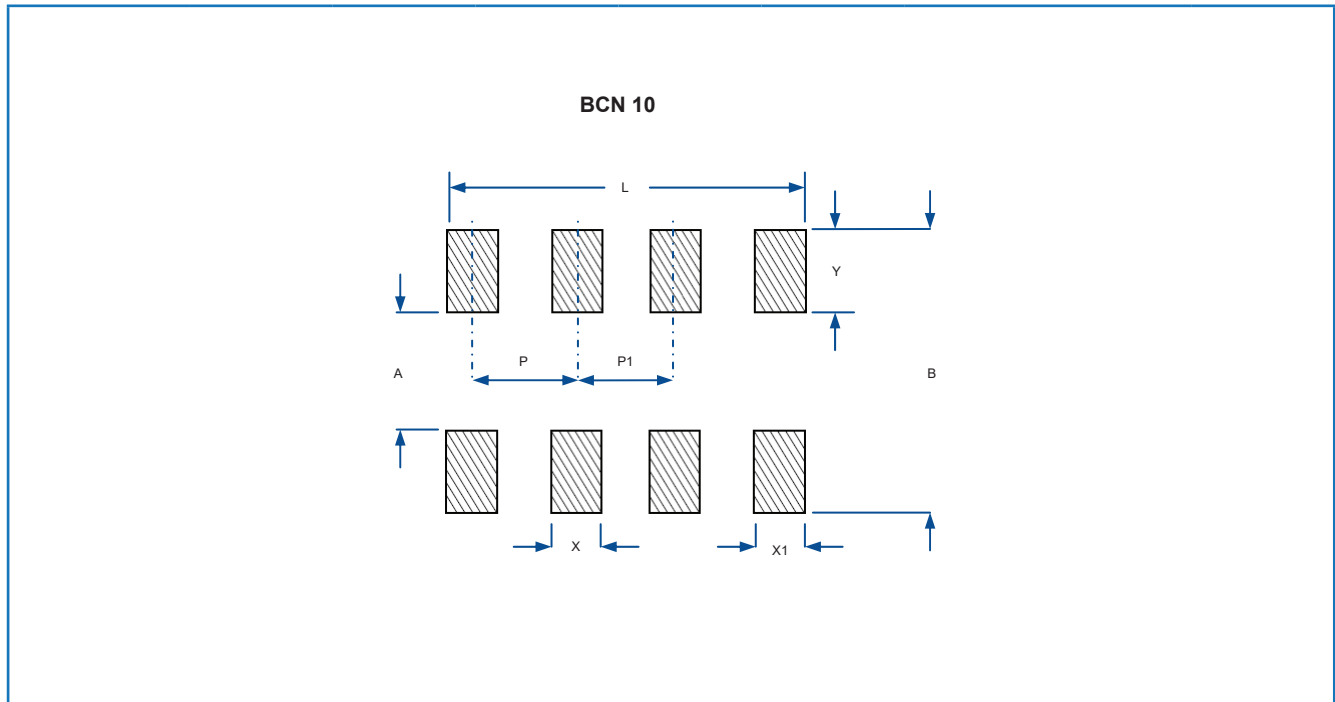
Solder pad layout (Inch / mm)



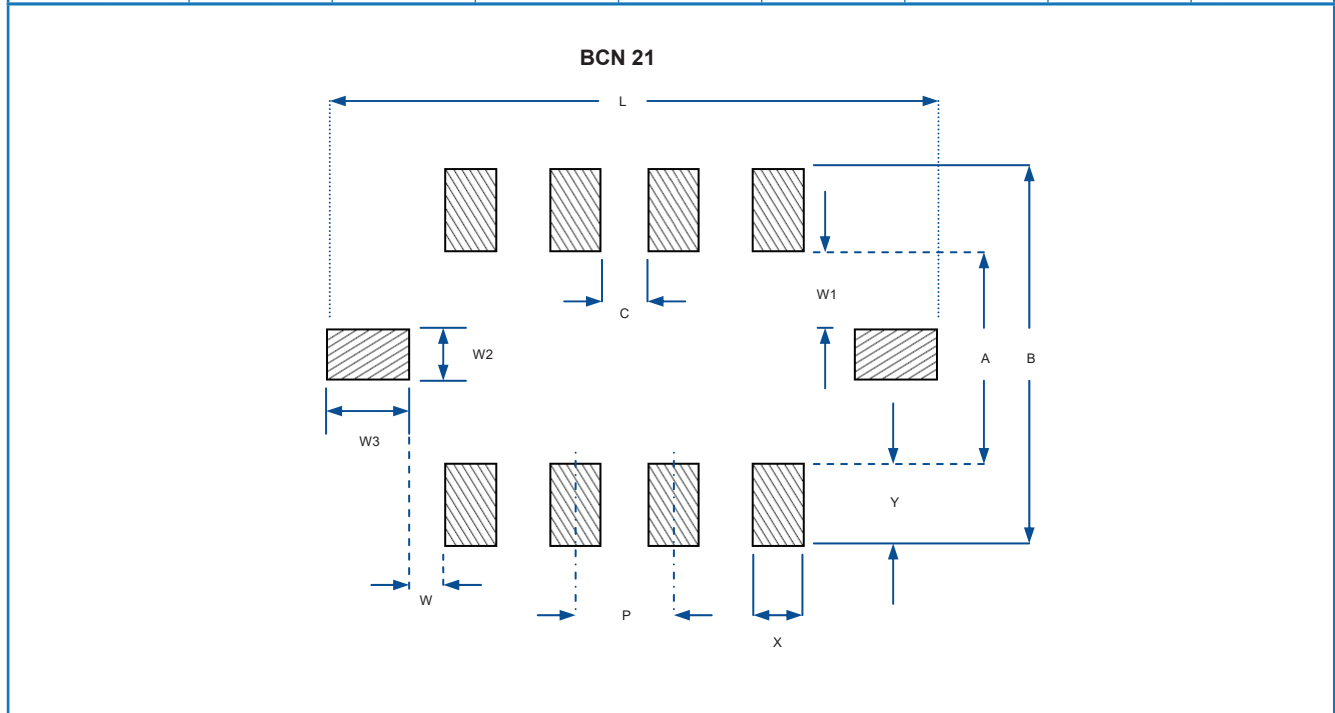
General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

Solder pad layout (Inch / mm)



	P	P1	A	B	X	X1	Y	L
BCN 10	.024	.020	.020 ±.004	.060 ±.004	0.10 ±.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



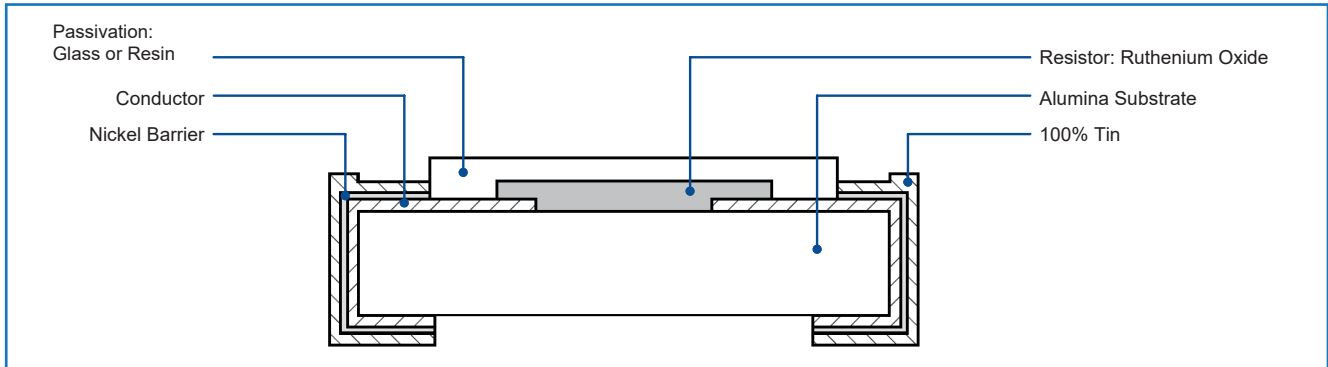
	P	A	B	C	X	Y	W	W1	W2	W3	L
BCN 21	.032	.060 ±.008	.120 ±.008	.016 ±.004	.016 ±.004	.030 ±.004	.012 ±.001	.015 ±.004	.030 ±.004	.030 ±.004	.196 ±.008
	0.80	1.20 ±0.20	3.00 ±0.20	0.40 ±0.10	0.40 ±0.10	0.75 ±0.10	0.31 ±0.02	0.38 ±0.10	0.75 ±0.10	0.75 ±0.10	4.98 ±0.20

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

BCN Series

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).



1	2	3	4	5	6	7	8	9	10	11
Series	Width	Number of Resistors	Circuit	Edge	Termination	TCR (ppm/ $^\circ\text{C}$)	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	Blank=Standard
	10=1.0mm	8	S=Standard	B=Square	I=Internal (concave)	Z= ± 100	4 digits for uniquely E96 and for all values at 1%	J= $\pm 5\%$ (Blank for jumper)	13=13" reel	S=Anti-sulphur
	16=1.6mm		bussed							
	21=2.1mm		R=Reverse							
	31=3.1mm		bussed							
							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		

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Resistor Networks & Arrays](#) category:

Click to view products by [TT Electronics](#) manufacturer:

Other Similar products are found below :

[CS6600552K000B8768](#) [CSC06A0122K0GEJ](#) [CSC08A01470KGEK](#) [M8340105K1002FGD03](#) [M8340106MA010FHD03](#)
[M8340107K1471FGD03](#) [M8340108K1001FCD03](#) [M8340108K2402GGD03](#) [M8340108K3240FGD03](#) [M8340108K3242FGD03](#)
[M8340108K3322FCD03](#) [M8340108K4991FGD03](#) [M8340108K6192FGD03](#) [M8340108K6202GGD03](#) [M8340109K2002FCD03](#)
[M8340109M4701GCD03](#) [EXB-24N121JX](#) [EXB-24N330JX](#) [EXB-24N470JX](#) [EXB-A10E102J](#) [EXB-A10E104J](#) [744C083101JTR](#) [EXB-](#)
[U14360JX](#) [EXB-U18240JX](#) [EXB-U18390JX](#) [MDP1603100KGE04](#) [PRA100I2-1KBWNW](#) [GUS-SS4-BLF-01-1002-G](#)
[ACAS06S0830339P100](#) [ACAS06S0830343P100](#) [ACAS06S0830344P100](#) [RM2012A-102/104-PBVW10](#) [RM2012A-102503-PBVW10](#)
[RM2012A-502104-PBVW10](#) [RM3216B-102302-PBVW10](#) [L091S102LF](#) [ACAS06S0830341P100](#) [ACAS06S0830342P100](#)
[ACAS06S0830345P100](#) [EXB-14V300JX](#) [EXB-U14220JX](#) [EXB-U14470JX](#) [EXB-U18330JX](#) [EXB-V4N100JV](#) [EXB-V8V220GV](#) [PRA100I2-](#)
[10KBWN](#) [PRA100I4-10KBWN](#) [CSC09A014K70JEK](#) [M8340102M4701JAD04](#) [M8340105K1002GGD03](#)