

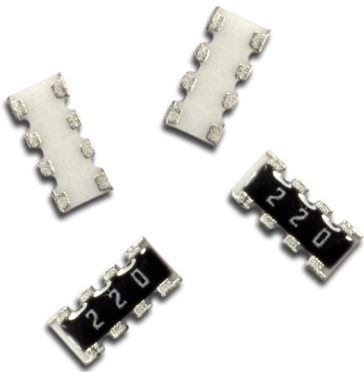
# Thick Film Chip Arrays

## BCN Series



### Features:

- Sulphur resistant version available (tested to ASTM-B809)
- AEC-Q200 (BCN10 and BCN164AB)
- Convex terminations
- Isolated and bussed versions



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

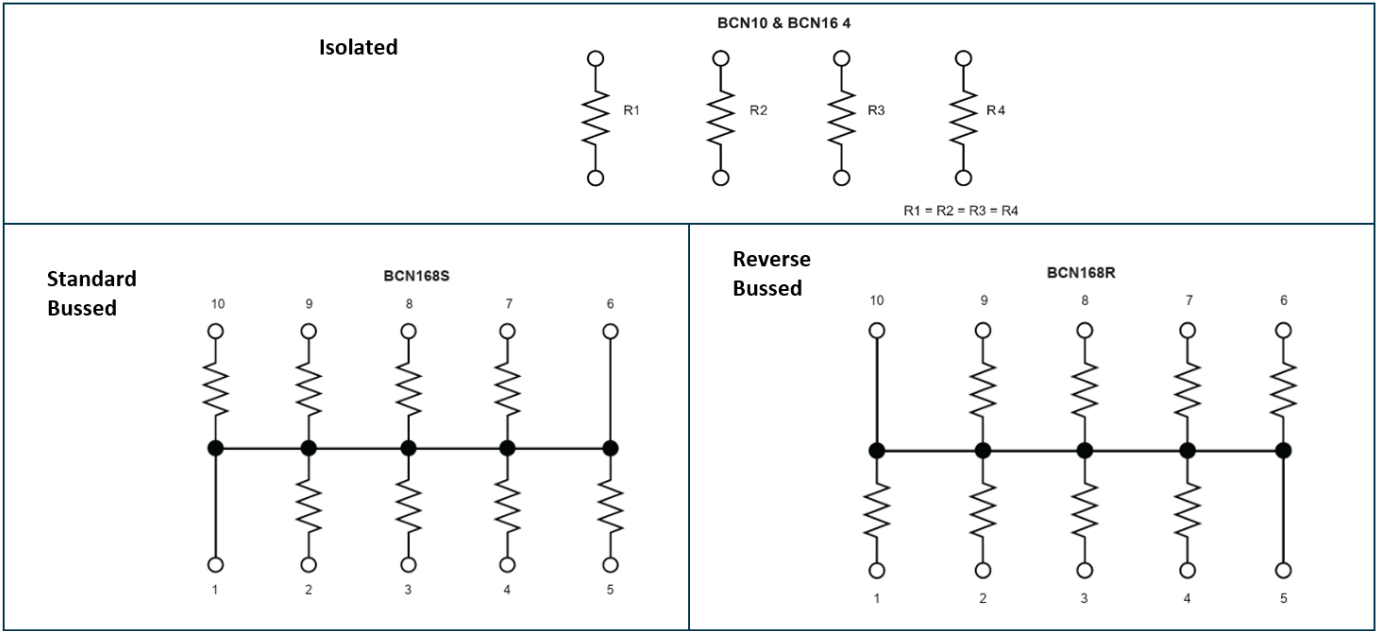
### Summary of Types

Type	Part Number Start	Width (mm)	Resistor Elements	Circuit	Package Size	Scalloped Convex	Square Convex
BCN10	BCN104AB	1	0402 x 4	Isolated	0804		
BCN164	BCN164A	1.6	0603 x 4		1206		
	BCN164AB						
BCN168	BCN168SB		0603 x 8	Standard Bussed			
	BCN168RB	Reverse Bussed					

### Electrical Data

		BCN10	BCN164	BCN168
Resistor power rating at 70°C	mW	63		32
Package power rating at 70°C	mW	250		
Limiting element voltage	V	25	50	25
Maximum overload voltage	V	50	100	63
Resistance range	Ω	10R – 1M0		100R – 1M0
Resistance tolerance	%	1, 5		5
TCR	ppm/°C	±200		
Standard values		E24 (for 5% tolerance), E96 (for 1% tolerance)		
Ambient temperature range	°C	-55 to +155		

### Circuit Data



#### 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

Dimensions in mm and weight in mg										
Type	L	W	H	P	B	B1	C	Wt. nom.		
BCN10	2 ±0.1	1 ±0.1	0.45 ±0.1	0.5 ±0.05	0.3 ±0.1	0.4 ±0.1	0.26 ±0.19	1.97		
BCN164	3.2 ±0.15	1.6 ±0.15	0.5 ±0.15	0.8 ±0.05	0.5 ±0.1	-	0.28 ±0.18	6.66		

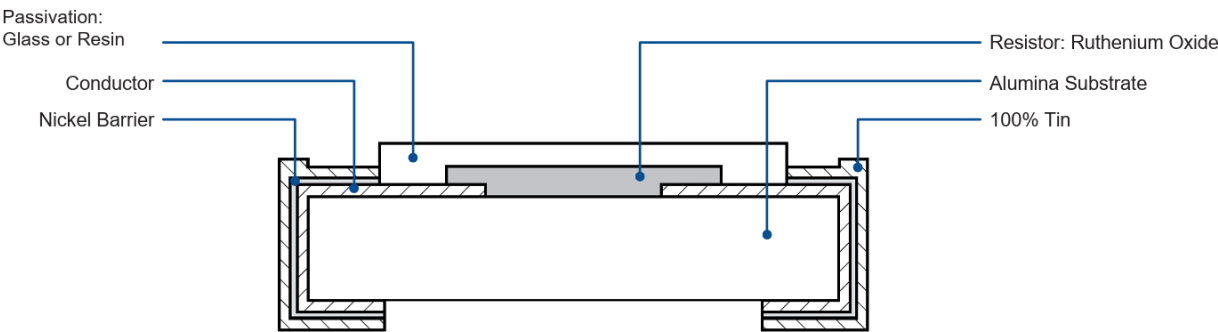
BCN164A (scalloped convex)

BCN10, BCN164AB (square convex)

Dimensions in mm and weight in mg											
Type	L	W	T	A	B1	B2	C nom.	P nom.	Wt. nom.		
BCN168	3.2 ±0.2	1.6 ±0.2	0.5 ±0.1	0.3 ±0.15	0.36 ±0.15	0.5 ±0.15	0.2	0.64	7.21		

BCN168 (square convex)

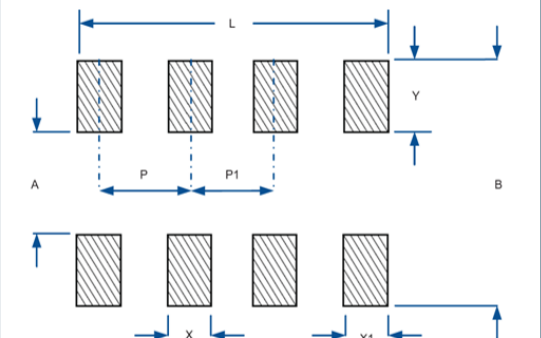
Construction

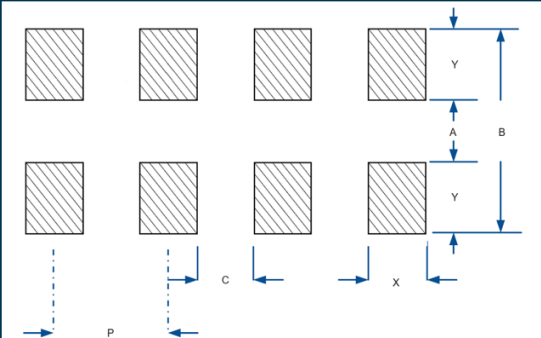


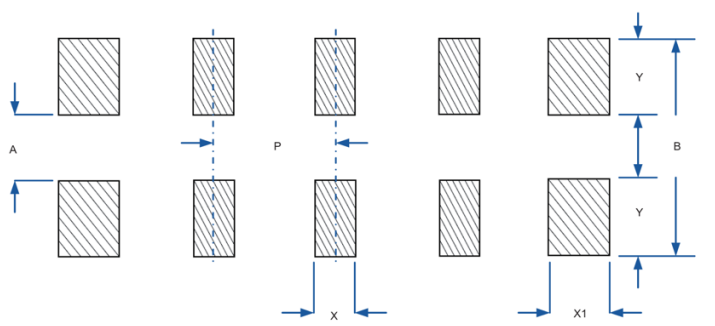
Marking

BCN parts may be unmarked or marked with ohmic values.  
If marked, 5% tolerance parts are marked with three characters (e.g. 102), whilst 1% tolerance parts may be marked with 3 or 4 characters (e.g. 102, 1001, 4991).

### Recommended Solder Pads

Dimensions in mm									
Type	P	P1	A	B	X	X1	Y	L	
BCN10	0.6 ±0.1	0.5	0.5 ±0.1	1.5 ±0.3	0.25 ±0.15	0.45 ±0.1	0.5 ±0.15	2.15 ±0.1	

Dimensions in mm							
Type	P	A	B	C	X	Y	
BCN164	0.8	1 ±0.2	3 ±0.15	0.35	0.45	1	

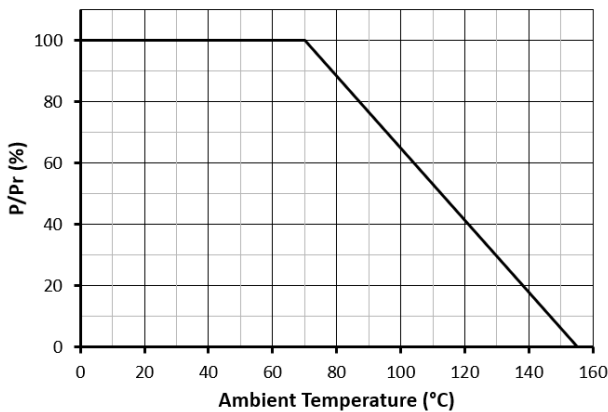
Dimensions in mm							
Type	P	A	B	X	X1	Y	
BCN168	0.64	1.2	2.4	0.3	0.45	0.6	

### Performance Data

Test	Method	Maximum (+0.1Ω)
Load life	1000 hours, cyclic load at 70°C	±ΔR% 3
Short term overload	2.5 x rated voltage for 5s	±ΔR% 2
High temperature operation	1000 hours, 155°C	±ΔR% 3
Temperature cycling	5 cycles, -55 to +155°C	±ΔR% 1.5
Moisture resistance	1000 hours, 40°C, 95% RH	±ΔR% 3
Resistance to solder heat	260°C for 10s	±ΔR% 1
Sulphur resistance <sup>1</sup>	1000 hours, 50°C, 92% RH, 3-5ppm H <sub>2</sub> S	±ΔR% 0.5

Note 1: Anti-sulphur construction only.

Temperature Derating



Ordering Procedure

Example: BCN164AB102J7S (BCN 1.6mm wide, 4 resistors, isolated circuit, square edge, convex terminations at 1 kilohm  $\pm 5\%$ , on a 7" reel, anti-sulphur construction, Pb-free)

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

1 Series	2 Width	3 Resistor Count	4 Circuit	5 Edge	6 Value	7 Tolerance	8 Packaging	9 Construction
BCN	10 = 1mm	4	A = Isolated	Blank = Scalloped	3 digits for E24 at 5%	F = $\pm 1\%$	7 = 7" reel	Blank = Standard
	16 = 1.6mm	8	S = Standard bussed	B = Square	4 digits for uniquely E96 and for all values at 1%	J = $\pm 5\%$ (Blank for Jumper)	13 = 13" reel	S = Anti- sulphur
			R = Reverse bussed		JP = Jumper			

Valid Options										Packaging Quantity & Tape		
1			2		3	4	5	6	9		8	
B	C	N	1	0	4	A	B	JP	S (5% tolerance & 7" reel only)		7 = 10,000/reel, 13 = 40,000/reel, Paper tape  7 = 5,000/reel, 13 = 20,000/reel, Paper tape	
B	C	N	1	6	4	A		JP	S (1% tolerance & 7" reel only)			
B	C	N	1	6	4	A	B	JP	S			
B	C	N	1	6	8	S	B					
B	C	N	1	6	8	R	B		S (7" reel only)			