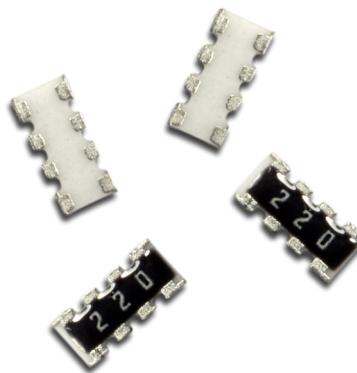


Thick Film Chip Arrays

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	1.6	0402 x 4	Isolated	0804		
BCN164	BCN164A		0603 x 4		1206		
	BCN164AB			Standard Bussed			
BCN168	BCN168SB		0603 x 8	Reverse Bussed			
	BCN168RB						

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
Maximum overload voltage	V	50	100
Resistance range	Ω	10R – 1MΩ	100R – 1MΩ
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

Isolated		BCN10 & BCN164	
		R1	R2
			R3
			R4
R1 = R2 = R3 = R4			
Standard Bussed		BCN168S	Reverse Bussed
			BCN168R
			10 9 8 7 6
			1 2 3 4 5

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.

BI Technologies IRC Welwyn

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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	

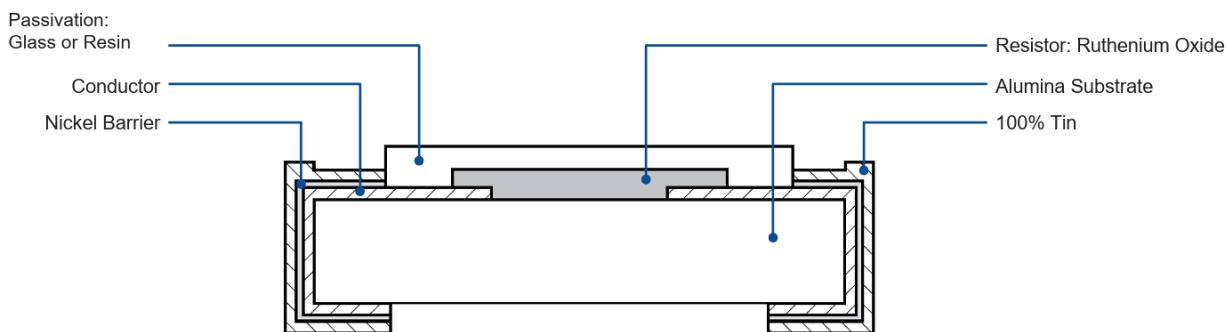
BCN164A (scalloped convex)

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

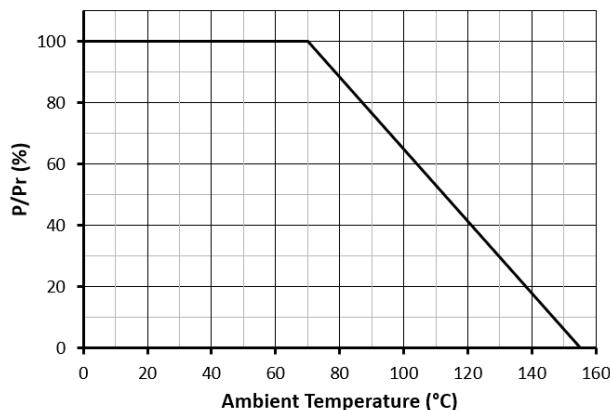
Dimensions in mm						
Type	P	A	B	X	X1	Y
BCN168	0.64	1.2	2.4	0.3	0.45	0.6

Performance Data

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

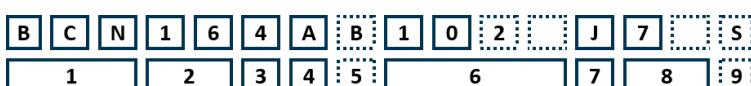
Note 1: Anti-sulphur construction only.

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)



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 (standard)	Blank = Standard	
		8	S = Standard bussed	B = Square	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		JP = Jumper				
					13 = 13" reel				

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)	
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		7 = 10,000/reel, 13 = 40,000/reel, Paper tape	
B	C	N	1	6	8	R	B		7 = 5,000/reel, 13 = 20,000/reel, Paper tape	
									S (7" reel only)	