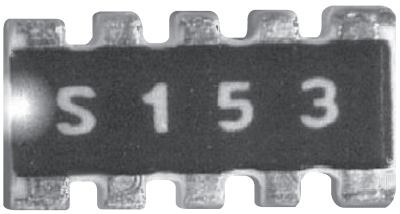
Thick Film Chip Arrays

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	1.0	0402 x 4	Isolated	0804		■
BCN164	BCN164A	1.6	0603 x 4		1206	■	
	BCN164AB						■
BCN168	BCN168SB		0603 x 8	Bussed			■
	BCN168RB						■

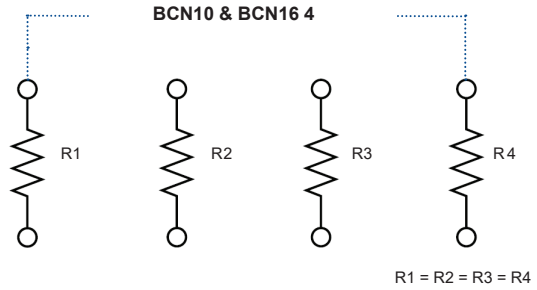
Electrical Data

		BCN10	BCN164	BCN168
Resistor power rating @70°C	mW	63		32
Package power rating @70°C	mW	250		
Limiting element voltage	V	25	50	25
Maximum overload voltage	V	63	125	63
Resistance range	ohms	10R – 1M0		100R – 1M0
Resistance tolerance	%	1, 5	1, 2, 5	5
TCR	ppm/°C	±200		
Standard values		E24 (for 2% or 5% tolerance), E96 (for 1% tolerance)		
Ambient temperature range	°C	-55 to +155		

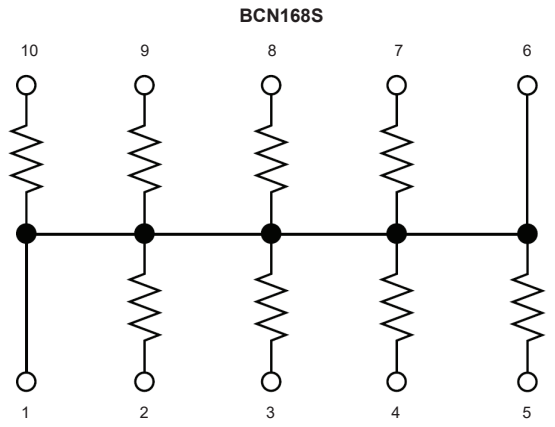
BCN Series

Circuits

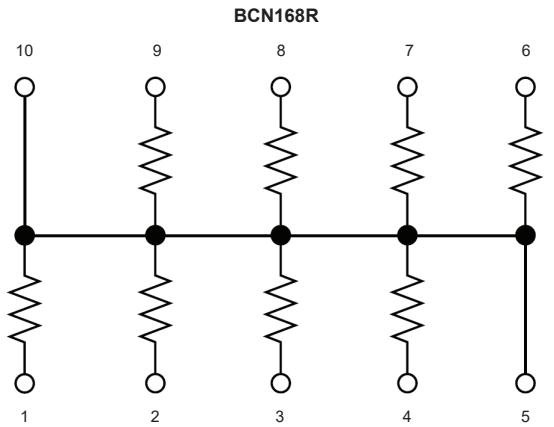
Isolated



Standard Bussed



Reverse Bussed



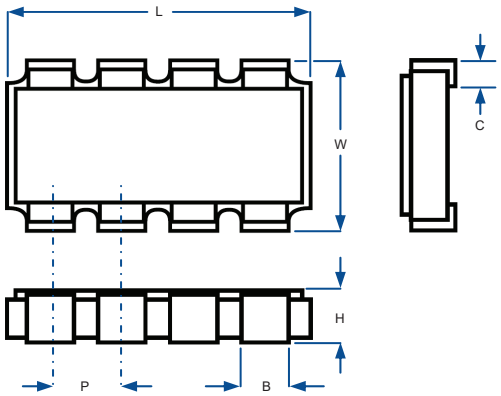
Environmental Data

Test	Condition	ΔR% (+0.1Ω)
Load life	1000 hrs cyclic load @ 70°C	3
Short term overload	2.5 x rated voltage for 5s	2
High temperature operation	1000 hrs @ 155°C	3
Temperature cycling	5 cycles, -55 to +155°C	1
Moisture resistance	1000 hrs @ 40°C, 95% RH	3
Resistance to solder heat	260°C for 10s	1
Sulphur resistance[1]	1000 hrs @ 50°C, 92% RH, 3-5ppm H_2S	0.5

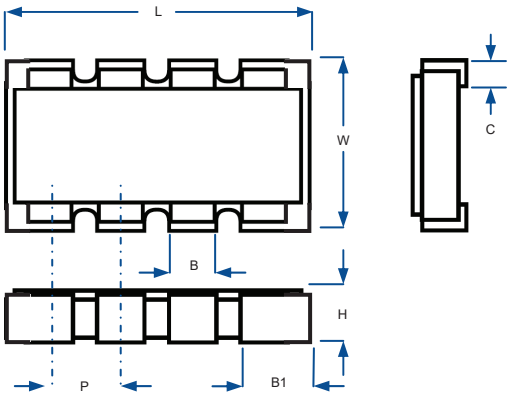
Note 1 – Anti-sulphur construction only

Physical Data (Inch /mm)

BCN164A (scalloped convex)

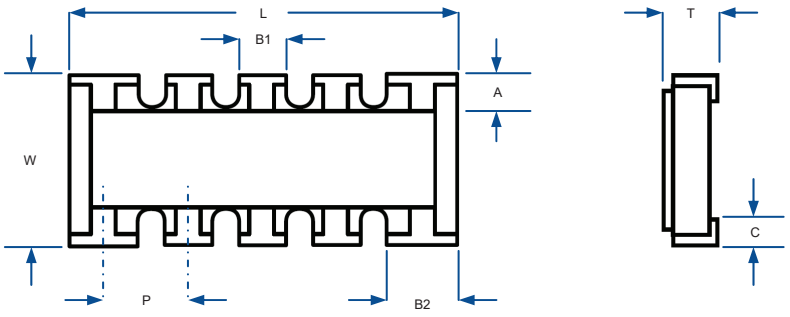


BCN10, BCN164AB (square convex)



	L	W	H	P	B	B1	C
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
BCN164A/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

BCN168 (square convex)

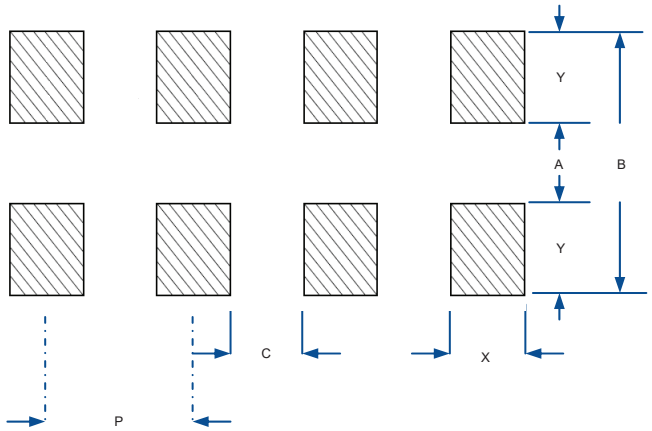


L	W	T	A	B1	B2	C	P
.126 ±.008	.063 ±.008	.020 ±.004	.012 ±.006	.014 ±.006	.020 ±.006	.008	.025
3.20 ±0.20	1.60 ±0.20	0.50 ±0.10	0.30 ±0.15	0.36 ±0.15	0.50 ±0.15	0.20	0.64

BCN Series

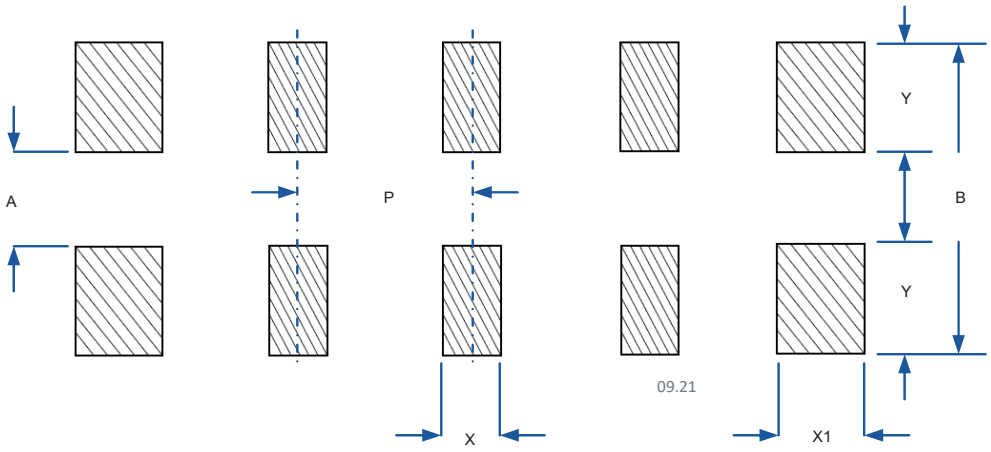
Solder pad layout (Inch / mm)

BCN164



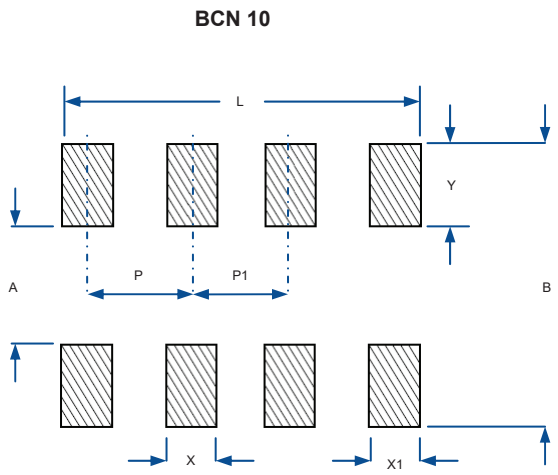
		Wave Solder Process					Re-flow Solder Process				
BCN164A/AB	P	A	B	C	X	Y	A	B	C	X	Y
	.032	.039	.118	.014	.018	.039	.039	.118	.014	.018	.039
	0.80	1.00	3.00	0.35	0.45	1.00	1.00	3.00	0.35	0.45	1.00

BCN168



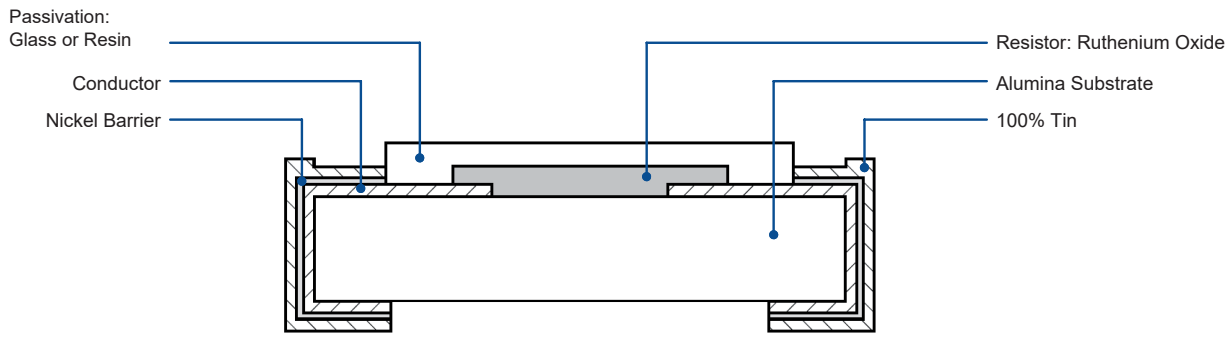
		Wave Solder Process					Re-flow Solder Process				
BCN 16 8RB / 8SB	P	A	B	X	X1	Y	A	B	X	X1	Y
	.025	.048	.096	.012	.018	.024	.048	.096	.012	.018	.024
	0.64	1.20	2.40	0.30	0.45	0.60	1.20	2.40	0.30	0.45	0.60

Solder pad layout (Inch / mm)



	P	P1	A	B	X	X1	Y	L
BCN 10	.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

Construction



Marking

BCN parts may be unmarked or marked with ohmic values. If marked, 2% and 5% tolerance parts are marked with three characters (e.g. 102). 1% tolerance parts may be marked with 3 or 4 characters (e.g. 102, 1001, 4991)

BCN Series

Ordering Procedure

Example: BCN164AB102J7S (BCN 1.6mm wide, 4 resistors, isolated circuit, square edge, convex terminations at 1 kilohm ±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 Number of Resistors	4 Circuit	5 Edge	6 Value	7 Tolerance	8 Packaging	9 Construction
BCN	10=1.0mm	4	A=Isolated	Blank= Scalloped	3 digits for E24 at 2% or 5%	F=±1%	7=7" reel (standard)	Blank= Standard
	16=1.6mm	8	S=Standard bussed	B=Square	4 digits for uniquely E96 and for all values at 1%	G=±2%	13=13” reel	S=Anti-sulphur
			R=Reverse bussed		JP=Jumper	J=±5% (Blank for jumper)		

Valid Options (1 - 5)								Valid Options (6 & 9)	Packaging Quantity & Tape (8)
B	C	N	1	0	4	A	B	JP=Jumper, S=Anti-sulphur (5% tolerance & 7" reel only)	7=10,000/reel, 13=40,000/reel, Paper tape
B	C	N	1	6	4	A		JP=Jumper, S=Anti-sulphur (1 or 2% tolerance & 7" reel only)	7=5000/reel, 13=20,000/reel, Paper tape
B	C	N	1	6	4	A	B	JP=Jumper, S=Anti-sulphur (1 or 5% tolerance only)	
B	C	N	1	6	8	S	B		
B	C	N	1	6	8	R	B	S=Anti-sulphur (7" reel only)	