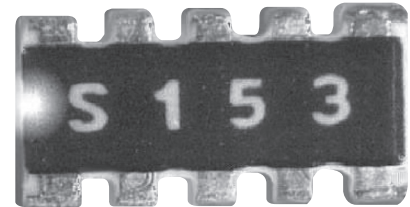


Thick Film Chip Arrays

BCN Series

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



Note - BCN4D will be End of Life in September 2021

 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	1.6	0603 x 8	Bussed	1206		
	BCN168RB						
BCN4D	BCN4D	3.1	1206 x 4	Isolated	2112		

Electrical Data

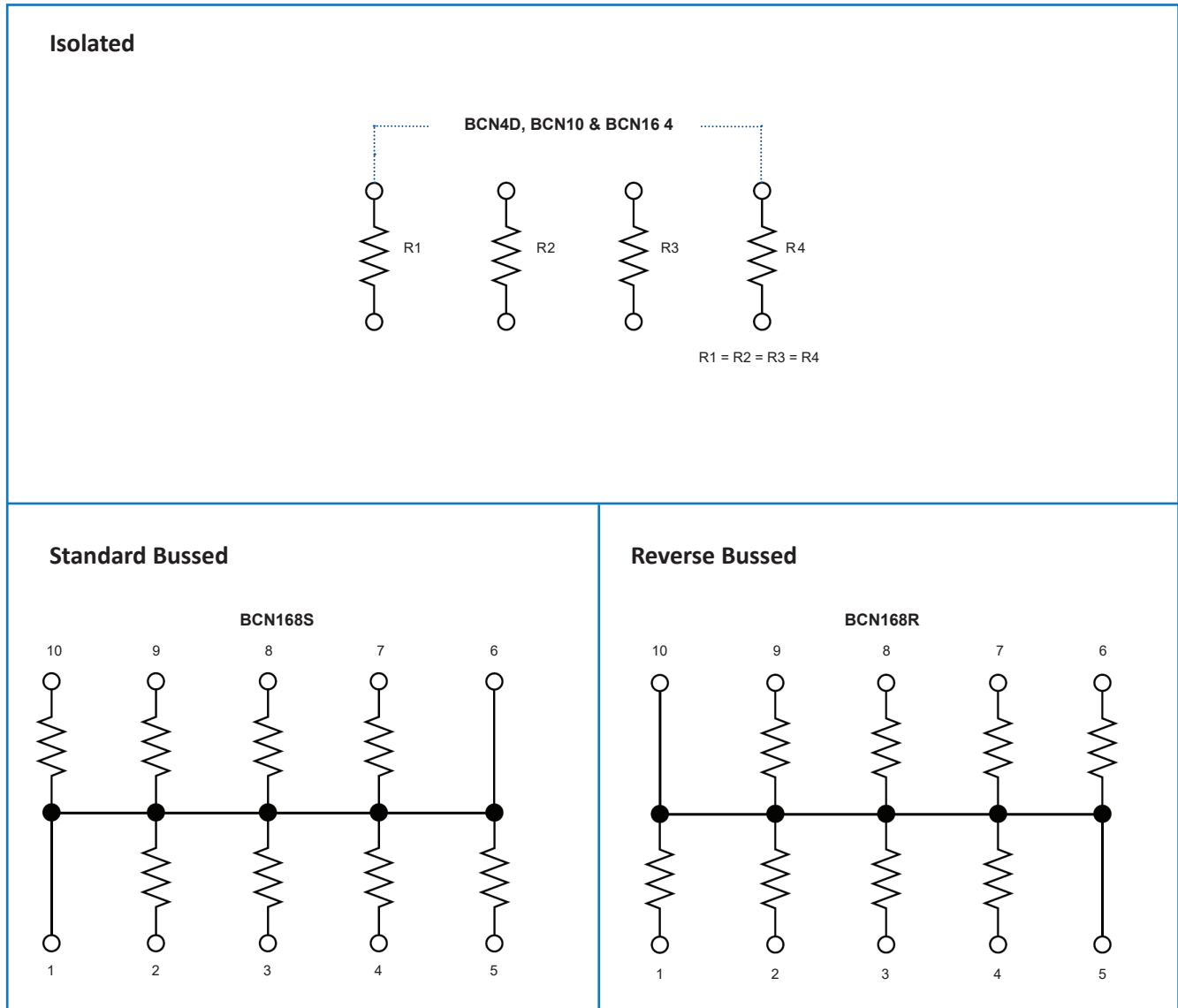
		BCN10	BCN164	BCN168	BCN4D
Resistor power rating @70°C	mW	63		32	125
Package power rating @70°C	mW	250			500
Limiting element voltage	V	25	50	25	75
Maximum overload voltage	V	63	125	63	188
Resistance range	ohms	10R – 1M0		100R – 1M0	10R – 1M0
Resistance tolerance	%	1, 5	1, 2, 5	5	1, 5
TCR	ppm/°C	±200			
Standard values		E24 (for 2% or 5% tolerance), E96 (for 1% tolerance)			
Ambient temperature range	°C	-55 to +155			

General Note

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BCN Series

Circuits



Environmental Data

Test	Condition	$\Delta R\%$ (+0.1 Ω)
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 ₂ S	0.5

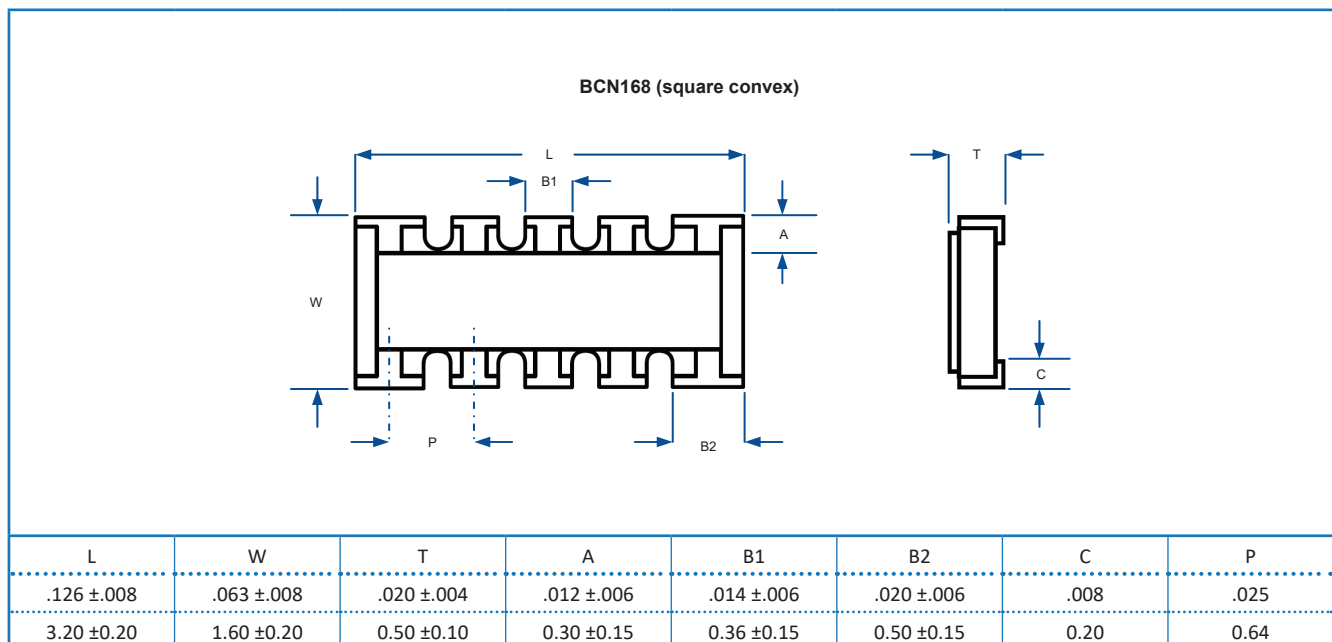
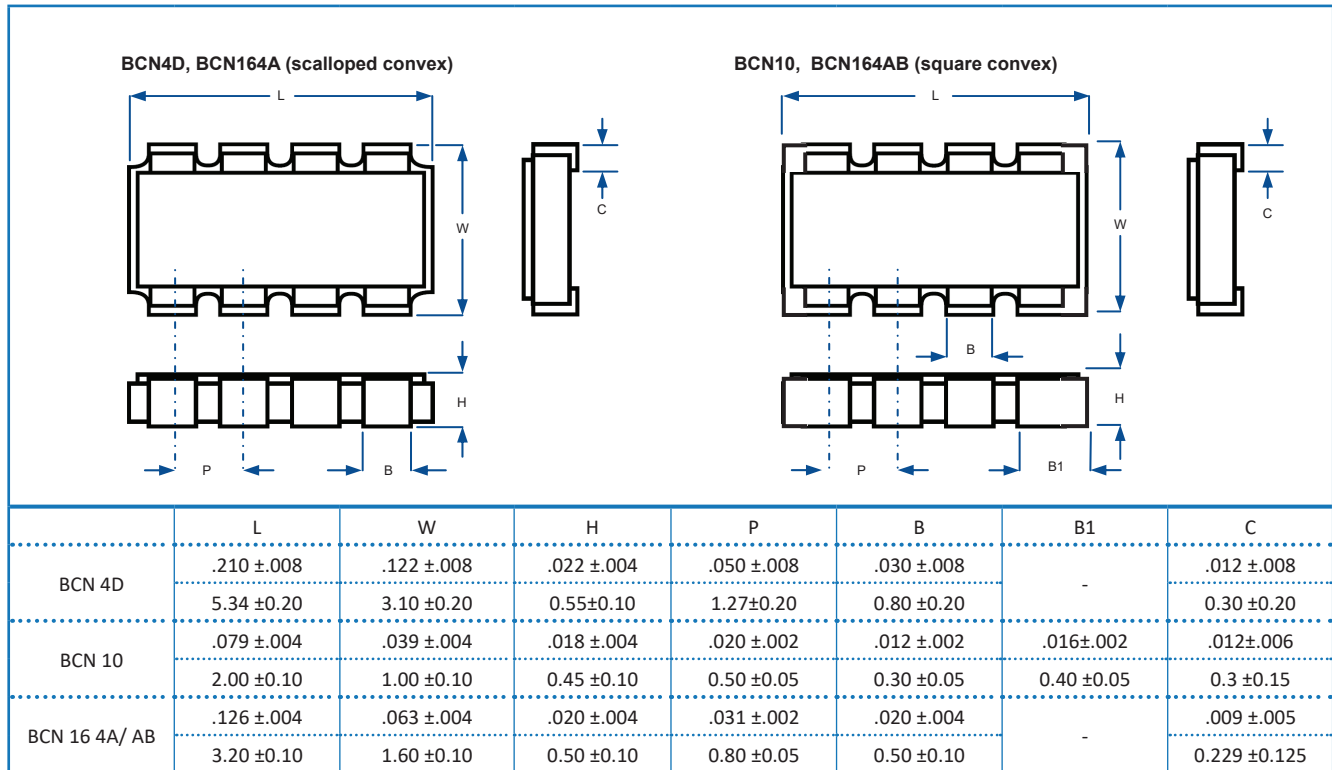
Note 1 – Anti-sulphur construction only

General Note

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BCN Series

Physical Data (Inch /mm)



General Note

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BCN Series

Solder pad layout (Inch / mm)

BCN4D, BCN164

	Wave Solder Process						Re-flow Solder Process				
	P	A	B	C	X	Y	A	B	C	X	Y
BCN 4D	.050	.087	.169	.022	.028	.041	.087	.154	.022	.028	.034
	1.27	2.20	4.30	0.57	0.70	1.05	2.20	3.90	0.57	0.70	0.85
BCN 16 4A, AB	.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

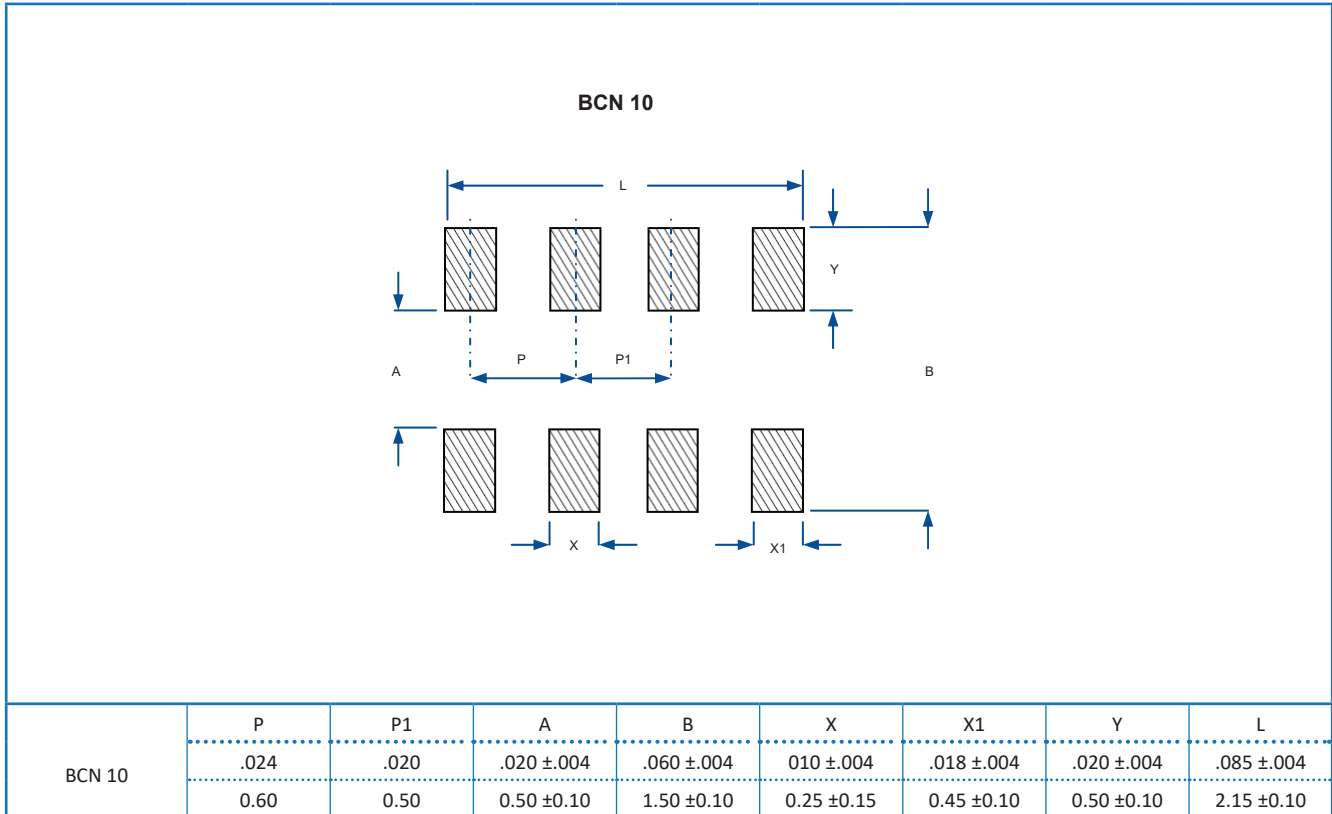
	Wave Solder Process						Re-flow Solder Process				
	P	A	B	X	X1	Y	A	B	X	X1	Y
BCN 16 8RB / 8SB	.025	.048	.096	.012	.018	.024	.048	.096	.012	.018	.024
	0.64	1.20	2.40	0.30	0.45	0.60	1.20	2.40	0.30	0.45	0.60

General Note

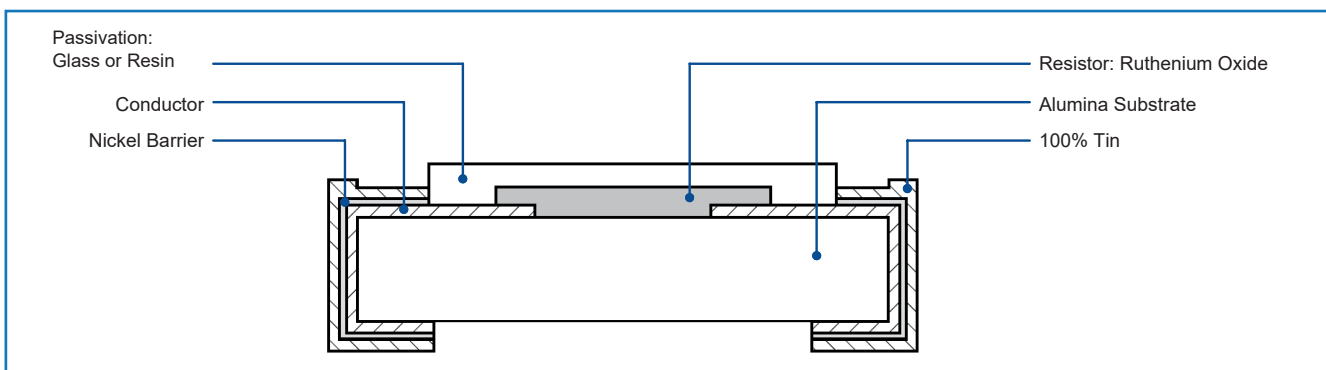
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BCN Series

Solder pad layout (Inch / mm)



Construction



General Note

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BCN Series

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	2	3	4	5	6	7	8	9
Series	Width	Number of Resistors	Circuit	Edge	Value	Tolerance	Packaging	Construction
BCN	Blank=3.1mm	4	A=Isolated	Blank=Scalloped	3 digits for E24 at 2% or 5%	F= $\pm 1\%$	7=7" reel	Blank=Standard
		8	D=Isolated			G= $\pm 2\%$	13=13" reel	
	10=1.0mm		S=Standard bussed	B=Square	4 digits for uniquely E96 and for all values at 1%	J= $\pm 5\%$		S=Anti-sulphur
	16=1.6mm		R=Reverse bussed			(Blank for jumper)		
21=2.1mm					JP=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					7=10,000/reel, 13=40,000/reel, Paper tape	
B	C	N	1	6	4	A		JP=Jumper, S=Anti-sulphur					7=5000/reel, 13=20,000/reel, Paper tape	
B	C	N	1	6	4	A	B	JP=Jumper, S=Anti-sulphur						
B	C	N	1	6	8	S	B							
B	C	N	1	6	8	R	B	S=Anti-sulphur						
B	C	N			4	D		JP=Jumper, S=Anti-sulphur					7=4000/reel, 13=16,000/reel, Plastic tape	

General Note

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Mouser Electronics

Authorized Distributor

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[BCN164A220J7](#) [BCN164A223J7](#) [BCN164A272J7](#) [BCN164A330J13](#) [BCN164A330J7](#) [BCN164A390J13](#)
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