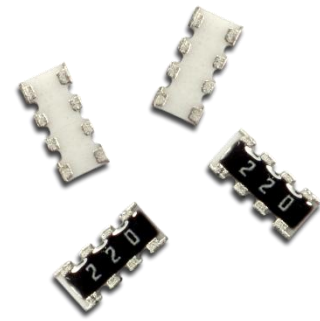


GBCN Series

Features:

- Completely free of Pb and its compounds
- RoHS compliant without exemption
- AEC-Q200 qualified



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

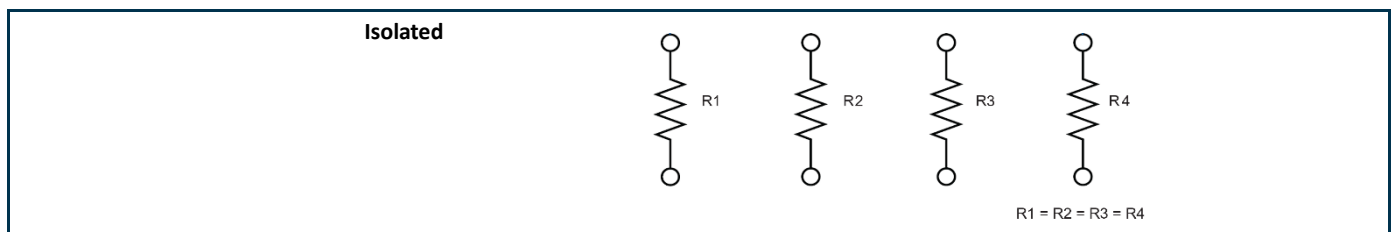
Summary of Types

Type	Part Number Start	Width (mm)	Resistor Elements	Circuit	Package Size	Scalloped Convex	Square Convex
GBCN164	GBCN164AB	1.6	0603 x 4	Isolated	1206		

Electrical Data

		GBCN164
Resistor power rating at 70°C	mW	63
Package power rating at 70°C	mW	250
Limiting element voltage	V	50
Maximum overload voltage	V	100
Resistance range	Ω	1R0 – 1M0
Resistance tolerance	%	1, 5
TCR	ppm/°C	<10R: ±400, ≥10R: ±200
Standard values		E24 preferred, E96 available
Ambient temperature range	°C	-55 to +155
Dielectric withstand	V	300

Circuit Data



Physical Data

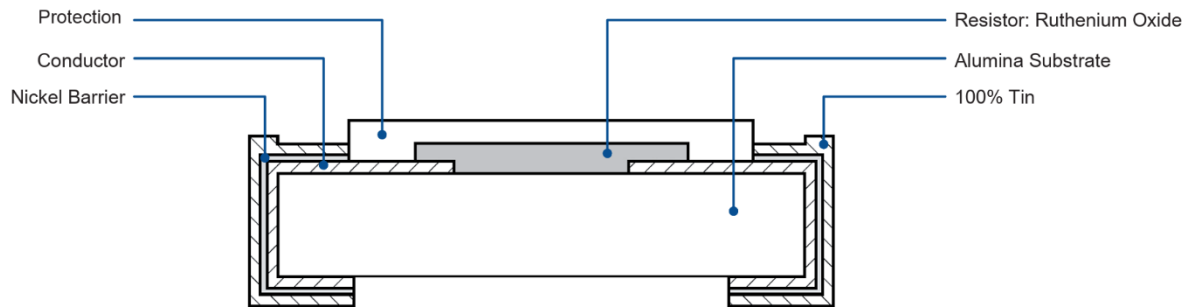
Dimensions in mm and weight in mg									
Type	L	W	T	A1	A2	B	P	G	Wt. nom.
GBCN164	3.2 ±0.2	1.6 ±0.2	0.5 ±0.1	0.65 ±0.15	0.5 ±0.15	0.3 ±0.15	0.8 ±0.1	0.3 ±0.15	8.6

General Note

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BI Technologies IRC Welwyn

Construction



Marking

5% tolerance parts are individually marked with three digits. The first two digits are the significant figures and the third defines the number of added zeros. 1% tolerance parts are individually marked with four digits. The first three digits are the significant figures and the fourth defines the number of added zeros.

Recommended Solder Pads

Dimensions in mm						
Type	A	B	B1	W	C	D
GBCN164	1 ±0.1	0.55 ±0.1	0.4 ±0.1	2.6 ±0.1	0.4 ±0.1	2.8 ±0.1

The diagram shows a top-down view of the solder pad layout. It consists of two rows of four pads each. Dimension A is the height of the pads. Dimension B is the width of the pads. Dimension B1 is the width of the gaps between pads. Dimension C is the width of the gaps between the two rows. Dimension D is the total width of the pad array. Dimension W is the total height of the pad array.

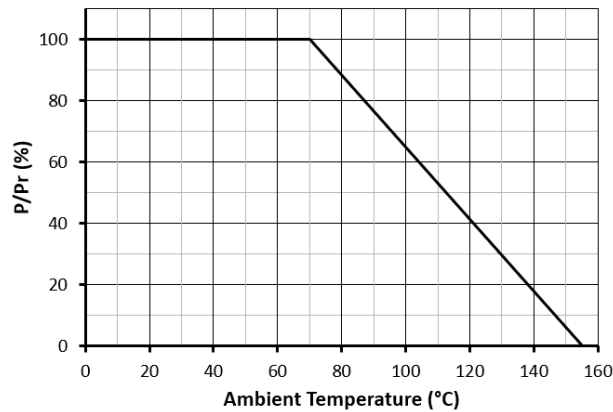
Performance Data

Test	Method	Maximum (+0.1Ω)
Load life	1000 hours, cyclic load at 70°C	±ΔR% 3
Short term overload	2.5 x rated voltage or maximum overload voltage for 5s	±ΔR% 2
High temperature operation	1000 hours, 155°C	±ΔR% 3
Biassed humidity	1000 hours, 85°C, 85% RH, 10% operating power	±ΔR% 3
Temperature cycling	1000 cycles, -55 to +155°C	±ΔR% 1
Resistance to solder heat	260°C for 10s	±ΔR% 1
Mechanical shock	6ms half-sine, 100g's peak	±ΔR% 1
Vibration	12 cycles, 20 mins, 3 orientations, 5g's peak, 10 – 2000Hz	±ΔR% 1
ESD	Direct contact discharge 8kV	±ΔR% 1
Board flex	2mm deflection	±ΔR% 1
Termination strength	1.8kg for 60s	No damage
Solderability		≥95% coverage
Resistance to solvents		Legible

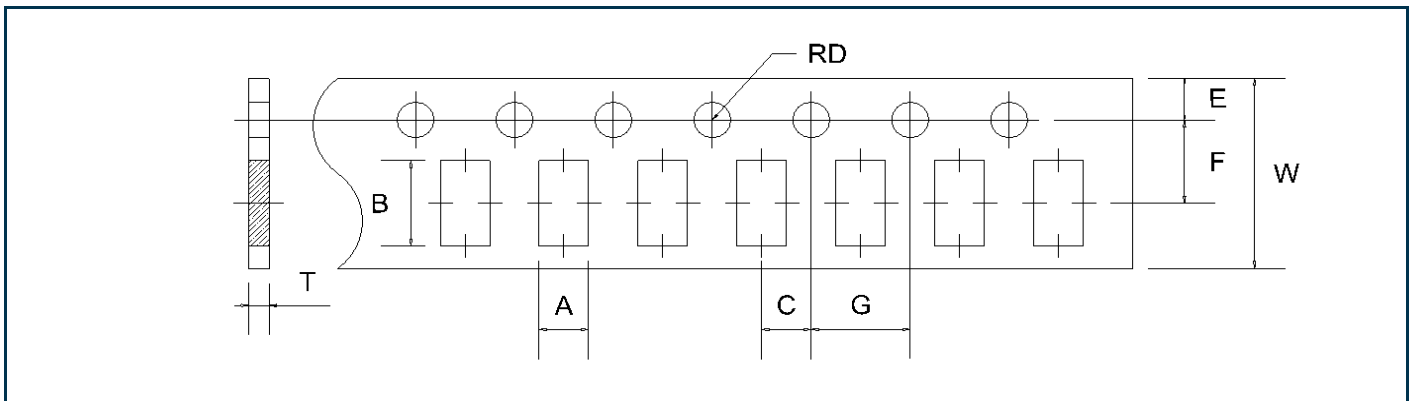
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Temperature Derating



Packaging



Dimensions in mm

Type	A	B	C	RD	E	F	G	W	T
GBCN164	2 ±0.2	3.6 ±0.2	2 ±0.05	1.5 +0.1/-0	1.75 ±0.1	3.5 ±0.05	4 ±0.1	8 ±0.2	0.83 ±0.1

Ordering Procedure

Example: GBCN164AB472J7 (GBCN 1.6mm wide, 4 resistors, isolated circuit, square convex at 4.7 kilohms ±5%, on a 7" reel, Pb-free)



1 Series	2 Width	3 Resistor Count	4 Circuit	5 Termination	6 Value	7 Tolerance	8 Packaging
GBCN	16 = 1.6mm	4	A = Isolated	B = Square Convex	3 digits for 5% 4 digits for 1% JP = Jumper	F = ±1% J = ±5% (Blank for Jumper)	7 7" reel 5000/reel, Paper tape

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