

### 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 (RoHS3)

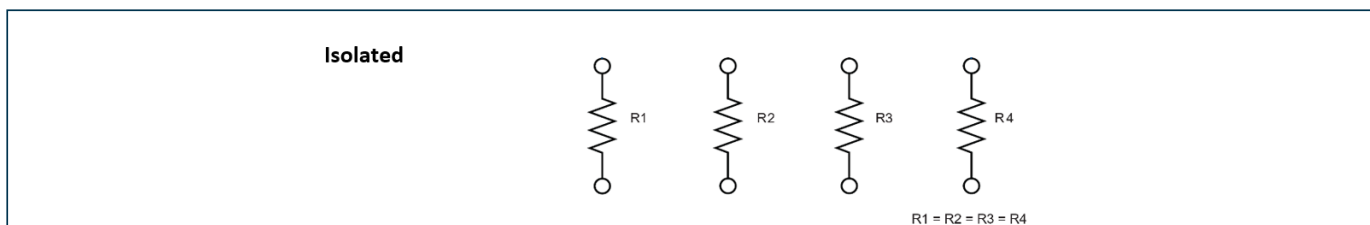
## Summary of Types

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

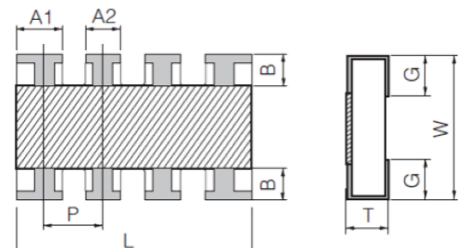
## Electrical Data

		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	$\Omega$	1R0 – 1M0
Resistance tolerance	%	1, 5
TCR	ppm/°C	<10R: $\pm 400$ , $\geq 10R$ : $\pm 200$
Standard values		E24 preferred, E96 available
Ambient temperature range	°C	-55 to +155
Dielectric withstand	V	300

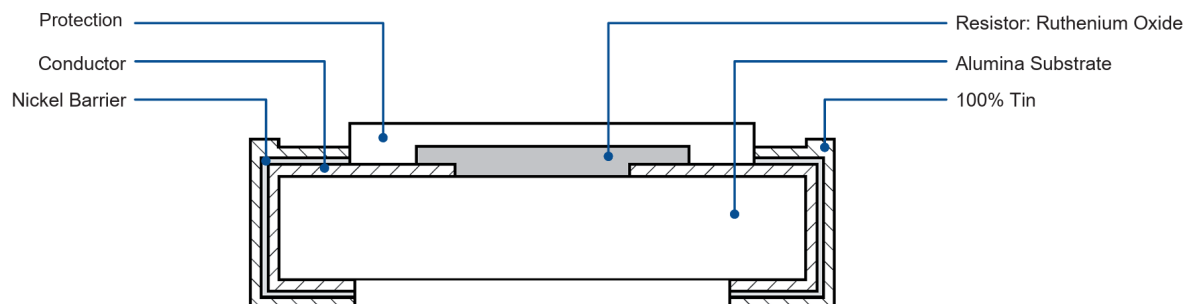
## Circuit Data



## Physical Data

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

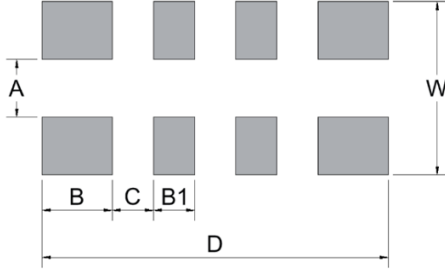
### Construction



### 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.

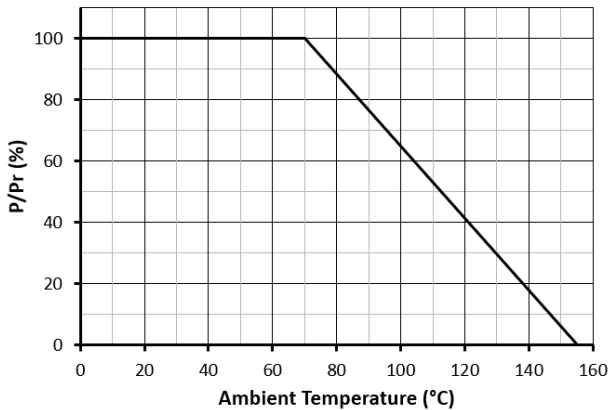
### Recommended Solder Pads

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	

### Performance Data

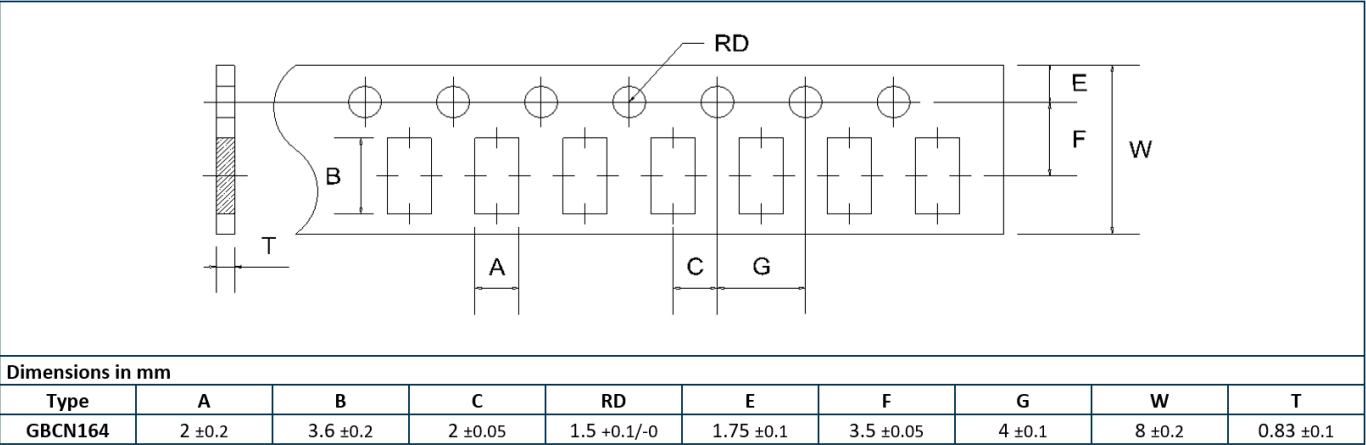
Test	Method	Maximum (+0.1Ω)
Load life	1000 hours, cyclic load at 70°C	±ΔR% 3
Short term overload	2.5 x rated voltage or maximum overload voltage for 5s	±ΔR% 2
High temperature operation	1000 hours, 155°C	±ΔR% 3
Biassed humidity	1000 hours, 85°C, 85% RH, 10% operating power	±ΔR% 3
Temperature cycling	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

Temperature Derating



Packaging

GBCN resistor arrays are supplied taped and reeled as per IEC 286-3.



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)

G	B	C	N	1	6	4	A	B	4	7	2	J	7
1	2	3	4	5	6	7	8						

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