



NTC THERMISTORS: TYPE GC32

GLASS ENCAPSULATED CHIP THERMISTOR

DESCRIPTION:

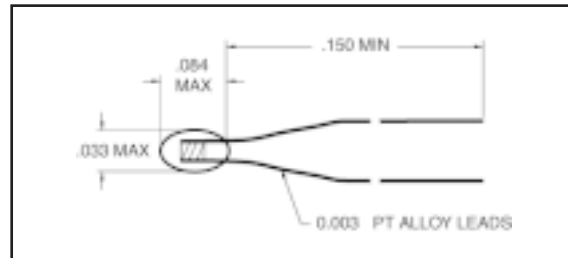
Large glass encapsulated chip thermistors on fine diameter platinum alloy lead-wires.

FEATURES:

- Lower cost alternative to glass encapsulated bead thermistors.
- Suitable for high volume, low cost temperature measurement, control or compensation applications
- Fast thermal response times
- Suitable for self-heated applications such as liquid level sensing or gas flow measurement
- Recommended for all applications where the customer will perform further assembly operations
- Normal operating/storage temperatures range from -80°C to +300°C
- Unaffected by severe environmental exposures, including nuclear radiation
- Intermittent operation up to 450°C is permissible, however, stability will be degraded.
- Improved beta tolerance with respect to glass encapsulated beads



DIMENSIONS:

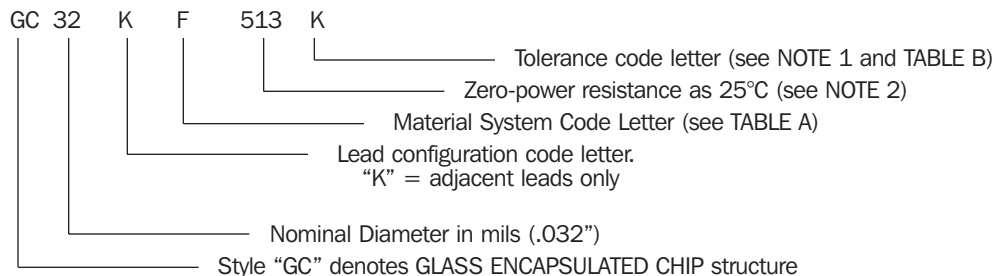


OPTIONS:

- Non-standard resistance tolerances
- Non-standard resistance values
- Reference temperature(s) other than 25°C - specify
- Mounting in special housings or enclosures
- Welded or soldered extension leads - specify lead material, diameter, length and insulation, if any.
- Leads can be pre-tinned or treated for improved soldering
- Calibration - specify temperature(s)
- Interchangeable pairs or sets, curve matching - specify temperature range(s) and tolerance(s)
- Special aging and conditioning for high reliability applications

CODING:

The code number to be ordered may be specified as follows:



NOTE 1: Special tolerances are available on request. Consult factory for special resistance tolerances, non-standard resistances and/or non-standard temperatures.

NOTE 2: The zero-power resistance at 25°C, expressed in Ohms, is identified by a three digit code number. The first two digits represent significant figures, and the last digit specifies the number of zeros to follow. Example: 51kOhms = "513". The standard resistance values are from the 24-Value series decade as specified in Military Standard MS90178.

1.0 / 1.1 / 1.2 / 1.3 / 1.5 / 1.6 / 1.8 / 2.0 / 2.2 / 2.4 / 2.7 / 3.0
3.3 / 3.6 / 3.9 / 4.3 / 4.7 / 5.1 / 5.6 / 6.2 / 6.8 / 7.5 / 8.2 / 9.1

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THERMAL AND ELECTRICAL PROPERTIES

TABLE A: THERMAL AND ELECTRICAL PROPERTIES:

The following table lists the THERMAL and ELECTRICAL properties for all LARGE GLASS ENCAPSULATED THERMISTORS. All definitions and test methods are per MIL-PRF-23648.

THERMISTOR SERIES:			GC32
BODY DIMENSIONS:			
	Nom. Diameter:		.032" (.81 mm)
	Max. Diameter:		.033" (.84 mm)
	Max. Length:		.084" (2.1 mm)
lead-wires:			
	Nom. Diameter:		.003" (.08 mm)
	Minimum Lead Length:		.150" (3.8 mm)
	Lead Material:		Platinum Alloy
	Available Cuts:		"K" adjacent only
MATERIAL SYSTEM:			Nominal Resistance Range @ 25°C
CODE LETTER	R-vs-T CURVE	25/125 RATIO	
A	GC1	11.9	300 – 1000 OHMS
A	GC2	14.7	1000 – 3000 OHMS
A	GC3	21.1	3000 – 20000 OHMS
F	GC4	27.8	20 – 100 KOHMS
H	GC5	28.2	100 – 200 KOHMS
G	GC6	36.4	200 – 600 KOHMS
D	GC7	42.3	600 – 1500 KOHMS
D	GC8	50.2	1500 – 5000 KOHMS
THERMAL TIME CONSTANT:			
	Still Air at 25°C:		4.5 sec
	Plunge into Water:		90 msec
DISSIPATION CONSTANT:			
	Still Air at 25°C:		.28 mW/°C
	Still Water at 25°C:		1.4 mW/°C
POWER RATING: (in air)			
	Maximum Power Rating:		.035 Watts
	100% Max. Power to:		150°C
	Derated to 0% at:		300°C

* consult factory for other sizes and resistance ranges

RESISTANCE -VS- TEMPERATURE CHARACTERISTICS: The nominal resistance range for the zero-power resistance at 25°C is shown for each available Material System. Each Material System is denoted by an ordering Code Letter, a referenced Curve number and the nominal 25°C/125°C resistance ratio. The R-vs-T Curves are found in table C.

TABLE B: STANDARD TOLERANCES:

Tolerance Code Letter	F	G	J	K	L	M	S
± % Tolerance at 25°C	1	2	5	10	15	20	Non-standard – consult factory

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