Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Radial Leaded Glass Encapsulated Style

measurement SPECIALTIES™

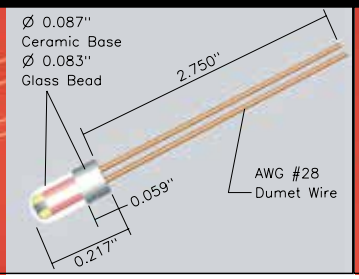
Features:

- Rugged, low cost, very high reliability
- Operation from -50˚C up to 300˚C
- Values from 2186Ω to 1.38MΩ at 25˚C
- Standard tolerance of ±3% at rated temp
- Temperature measurement and control
- Fast response time
- High temperature stability
- Glass encapsulation provides resistance to moisture and other environmental factors
- Available in ceramic reinforced glass body or glass bead configurations

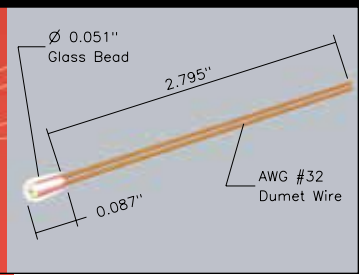
Description:

MS radial leaded glass encapsulated thermistors provide a low cost option for applications that require superior stability and high temperature operation. The thermistors are glass encapsulated to allow for operation in a wide array of environments including high humidity and rapid thermal cycling. The small size allows the sensor to react quickly to small temperature changes. Contact the factory for specific design or application information or the availability of options.

CERAMIC REINFORCED GLASS BEAD THERMISTOR



GLASS BEAD THERMISTOR



MS Part Number	Resistance @25˚C (Ohms)	Resistance Specification (±3%)	MS Matl	$\beta_{25/85}$ (Kelvin)
GC2183T-3-0	2186	6,000Ω @ 0˚C	T	3420 ± 2%
GC5373U-3-0	5369	15,000Ω @ 0˚C	U	3480 ± 2%
GC1074U-3-0	10,739	30,000Ω @ 0˚C	U	3480 ± 2%
GC4914A-3-100	49,120	3,300Ω @ 100˚C	A	3992 ± 2%
GC9864N-3-200	98,633	550Ω @ 200˚C	N	4066 ± 3%
GC2315R-3-200	231,440	1,000Ω @ 200˚C	R	4240 ± 3%
GC1396V-3-200	1,388,100	4,000Ω @ 200˚C	V	4557 ± 3%
Dissipation factor (δ) is 1.5mW/˚C Time constant (τ) is 18 sec nominally Max operating temperature is 300˚C				

MS Part Number	Resistance @25˚C (Ohms)	Resistance Specification (±3%)	MS Matl	$\beta_{25/85}$ (Kelvin)
GB2183T-3-0	2186	6,000Ω @ 0˚C	T	3420 ± 2%
GB5373U-3-0	5369	15,000Ω @ 0˚C	U	3480 ± 2%
GB1074U-3-0	10,739	30,000Ω @ 0˚C	U	3480 ± 2%
GB4914A-3-100	49,120	3,300Ω @ 100˚C	A	3992 ± 2%
GB9864N-3-200	98,633	550Ω @ 200˚C	N	4066 ± 3%
GB2315R-3-200	231,440	1,000Ω @ 200˚C	R	4240 ± 3%
GB1396V-3-200	1,388,100	4,000Ω @ 200˚C	V	4557 ± 3%
Dissipation factor (δ) is 0.75mW/˚C Time constant (τ) is 6 sec nominally Max operating temperature is 300˚C				

Standard resistance tolerance is ±3% at rated temperature

*See R/T tables on page 63.

		—		—
Basic P/N	Material		Tol. Code	Point-match Temperature (°C) (only used if other than 25°C)

Examples:
GC1074U-3-0 ..... Curve U material, ±3% at 0˚C
GB1396V-3-200 ..... Curve V material, ±3% at 200˚C

Resistance vs. Temperature Conversion Table
Radial Leaded Glass Encapsulated NTC Thermistor

MS Type	G_2183	G_5373	G_1074	G_4914	G_9864	G_2315	G_1396
Material	T	U	U	A	N	R	V
Beta ($\beta_{25/85}$)	3420	3480	3480	3992	4066	4240	4557
Temp. Coef. @25˚C (α_{25})	-3.75	-3.82	-3.82	-4.42	-4.46	-4.64	-4.99
Resistance Ratio R_0/R_{50}	6.59	6.81	6.81	9.22	9.47	10.30	12.34
Temperature (˚C)	Res (Ω)	Res (Ω)	Res (Ω)	Res (Ω)	Res (Ω)	Res (Ω)	Res (Ω)
-50	77,582	203,980	407,960				
-40	43,340	112,540	225,090				
-30	25,166	64,632	129,260				
-25	19,433	49,658	99.316	657,350	1,317,400		
-20	15,132	38,481	76,963	487,370	980,540		
-10	9,392	23,672	47,344	276,060	558,640		
0	6,000	15,000	30,000	162,210	329,400	806,460	
10	3,935	9,765	19,531	98,322	198,900	478,760	
20	2,644	6,516	13,033	61,465	123,750	292,850	
25	2,186	5,369	10,739	49,120	98,633	231,440	1,388,100
30	1,817	4,448	8,896	39,517	79,126	184,110	1,085,000
40	1,274	3,100	6,201	26,065	51,870	118,680	676,470
50	910.6	2,203	4,406	17,599	34,790	78,291	432,530
60	662.2	1,593	3,187	12,140	23,831	52,757	283,030
70	489.5	1,171	2,343	8,641	16,643	36,258	189,200
80	367.4	874.6	1,749	6,120	11,834	25,376	129,000
85	319.9	759.8	1,520	5,213	10,042	21,366	107,250
90	279.6	662.3	1,325	4,459	8,556	18,064	89,570
100	215.6	508.3	1,016	3,300	6,282	13,062	63,256
110	168.4	394.9	789.8	2,478	4,679	9,585	45,382
120	133.0	310.4	620.8	1,886	3,532	7,131	33,041
125	118.6	276.3	552.7	1,653	3,083	6,181	28,339
130	106.1	246.7	493.3	1,453	2,700	5,373	24,387
140	85.61	198.0	396.0	1,133	2,088	4,098	18,232
150	69.71	160.5	320.9	892.8	1,632	3,161	13,796
160	57.27	131.2	262.5	710.9	1,289	2,464	10,557
170	47.46	108.3	216.5	571.6	1,028	1,940	8,164
180	39.64	90.01	180.0	463.7	827.8	1,542	6,377
190	33.36	75.40	150.8	379.3	672.0	1,237	5,028
200	28.28	63.62	127.3	312.8	550.0	1,000	4,000
225				199.5	344.3	608.3	2,339
250				132.6	224.7	386.5	1,432
275				91.29	152.1	255.2	912.7
300				64.87	106.4	174.3	602.6

This R/T Conversion Table is provided for reference only. MS uses the Steinhart-Hart equation to calculate the nominal Rt/R_{25} value. 1°C tables are available upon request.

- α_{25} - Negative Temperature Coefficient of Resistance at 25˚C expressed in %/˚C. This is the percentage change in thermistor resistance for a 1°C change in its' body temperature at 25˚C. α is particularly useful in calculating the required resistance tolerance necessary to guarantee sensor accuracy. α at temperatures other than 25˚C is available upon request as tables in 1˚C increments.