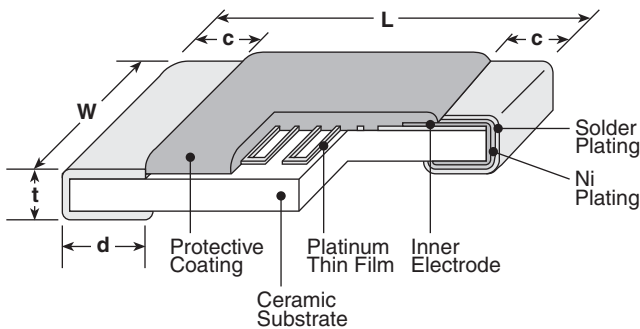


### features

- SMD platinum thin film thermal sensors
- T.C.R. is in accordance with JIS-DIN standards IEC
- Suitable for temperature control in various industrial equipment
- Suitable for both flow and reflow solderings
- Products with lead-free terminations meet EU RoHS requirements

### dimensions and construction



Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
<b>2B</b> (1206)	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.02±.012 (0.5±0.3)	.02±.012 (0.5±0.3)	.02±.006 (0.5±0.15)

### ordering information

New Part #	<b>SDT73H</b>	<b>2B</b>	<b>T</b>	<b>TE</b>	<b>100</b>	<b>F</b>	<b>385</b>
	Type	Size Code	Termination Material	Packaging	Nominal Resistance	Resistance Tolerance	T.C.R. (x 10 <sup>6</sup> /K)
		2B: 3.2x1.6mm	T: Sn	TEK: 4mm pitch plastic embossed (1,000 pieces/reel) TE: 4mm pitch plastic embossed (5,000 pieces/reel)	100: 100Ω 500: 500Ω	C: ±0.2% F: ±1%	

### applications and ratings

Part Designation	Resistance @ 0°C	Resistor Tolerance*	Thermal Time Constant**	Thermal Dissipation Constant**	T.C.R. (ppm/°C)	T.C.R. Tolerance (ppm/°C)	Specified Current	Operating Temperature Range
<b>SDT73H 2B</b>	100Ω 500Ω	C: ±0.2% F: ±1%	6.5 seconds	2.4mW/°C	3850	±50	1mA Max.: 100Ω 0.1mA Max.: 500Ω	-55°C to +155°C

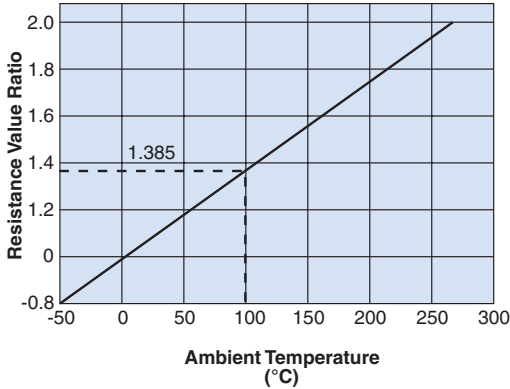
\* Please consult with us about the products equivalent to class B of JIS.

\*\* Thermal time constant and thermal dissipation constant are reference values, which are values of elements and vary with connecting or fixing methods. Thermal dissipation constant is approx. 4mW/°C under the surface mounting condition.

For further information on packaging, please refer to Appendix A.

### environmental applications

#### Temperature Characteristics



#### Pt100 Resistance - Temperature Characteristics (JIS C 1604<sup>-1997</sup>)

Temperature (°C)	0	-1	-2	-3	-4	-5	-6	-7	-8	-9
-50	80.31	79.91	79.51	79.11	78.72	78.32	—	—	—	—
-40	84.27	83.87	83.48	83.08	82.69	82.29	81.89	81.50	81.10	80.70
-30	88.22	87.83	87.43	87.04	86.64	86.25	85.85	85.46	85.06	84.67
-20	92.16	91.77	91.37	90.98	90.59	90.19	89.80	89.40	89.01	88.62
-10	96.09	95.69	95.30	94.91	94.52	94.12	93.73	93.34	92.95	92.55
0	100.00	99.61	99.22	98.83	98.44	98.04	97.65	97.26	96.87	96.48
	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
0	100.00	100.39	100.78	101.17	101.56	101.95	102.34	102.73	103.12	103.51
10	103.90	104.29	104.68	105.07	105.46	105.85	106.24	106.63	107.02	107.40
20	107.79	108.18	108.57	108.96	109.35	109.73	110.12	110.51	110.90	111.29
30	111.67	112.06	112.45	112.83	113.22	113.61	114.00	114.38	114.77	115.15
40	115.54	115.93	116.31	116.70	117.08	117.47	117.86	118.24	118.63	119.01
50	119.40	119.78	120.17	120.55	120.94	121.32	121.71	122.09	122.47	122.86
60	123.24	123.63	124.01	124.39	124.78	125.16	125.54	125.93	126.31	126.69
70	127.08	127.46	127.84	128.22	128.61	128.99	129.37	129.75	130.13	130.52
80	130.90	131.28	131.66	132.04	132.42	132.80	133.18	133.57	133.95	134.33
90	134.71	135.09	135.47	135.85	136.23	136.61	136.99	137.37	137.75	138.13
100	138.51	138.88	139.26	139.64	140.02	140.40	140.78	141.16	141.54	141.91
110	142.29	142.67	143.05	143.43	143.80	144.18	144.56	144.94	145.31	145.69
120	146.07	146.44	146.82	147.20	147.57	147.95	148.33	148.70	149.08	149.46
130	149.83	150.21	150.58	150.96	151.33	151.71	152.08	152.46	152.83	153.21
140	153.58	153.96	154.33	154.71	155.08	155.46	155.83	156.20	156.58	156.95
150	157.33	157.70	158.07	158.45	158.82	159.19	—	—	—	—

Note: Desired temperature values are obtained by adding temperatures in the vertical and horizontal axes. When calculating a resistance value of 105°C, read the value in the column where 100°C in the vertical axis and 5°C in the horizontal axis cross. The value will be 140.40Ω. The value for 500Ω at 0°C will be the value obtained by multiplying the resistance value in this table by 5.

#### Performance Characteristics

Parameter	Requirement $\Delta R \pm(\%+0.05\Omega)$		Test Method
	Limit	Typical	
Resistance	Within specified tolerance	—	0°C
T.C.R.	Within specified T.C.R.	3850±10ppm/°C	0°C/ +100°C
Insulation Resistance	100MΩ or more	—	d.c. 100V
Dielectric Withstanding Voltage	±0.5%	-0.019%	a.c. 100V, 60 seconds - 70 seconds
Resistance to Solder Heat	±0.5%	-0.004%	260°C for 10 seconds
Rapid Change of Temperature	±0.5%	-0.033%	-55°C (30 minutes)/ +25°C (2 - 3 minutes)/ +155°C (30 minutes)/ +25°C (2 - 3 minutes), 10 cycles
Moisture Resistance	±0.5%	-0.016%	40°C, 90 - 95% RH, 1000 hours, 1mA, 1.5 hr ON, 0.5 hr OFF cycle
Normal Temperature Load Life	±0.5%	-0.010%	20°C ± 10°C, 1000 hours, 1mA continuous turning on electricity
High Temperature Load Life	±0.5%	-0.017%	155°C, 1000 hours, 1mA continuous turning on electricity
High Temperature Exposure	±0.5%	-0.022%	+155°C, 1000 hours
Low Temperature Exposure	±0.5%	-0.029%	-55°C, 1000 hours