

CTT series / Thick Film Chip NTC Thermistor

特徴 / Features



高性能サーミスタ材料と量産性の高い厚膜製法を融合
優れた電気特性とコストパフォーマンスを兼ね備えた新構造のSMDサーミスタです。サーミスタ素子は頑強なセラミックチップ上に形成されガラスコートで保護されます。その独自構造から業界随一の熱応答速度を実現しました。極めて信頼性に優れ、AEC-Q200に対応。一部の品種で、UL1434対応しています。一部の品種で、使用温度範囲上限150度対応可能です。

Integrated High performance Thermistor-material and Thick Film Manufacturing process
Brand-new SMD structure provides Excellent electrical characteristics and low cost performance
Glass coated thermistor-element on tough ceramic body

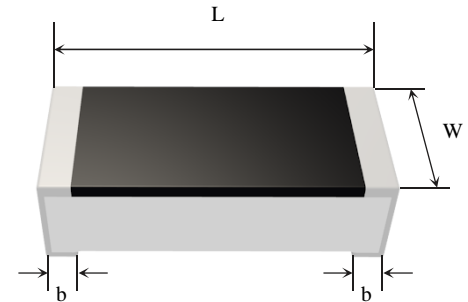
Highest Thermal response speed utilizing special structure of thermistor layer
Excellent reliabilities
Supports for AEC-Q200 is available..
UL1434 can be available in some parts
Some parts can resist in operating temperature range up to 150 .

品番構成 / Ordering Code

C	T	T	2	0	1	2	W	1	0	5	F	3	4	5	F	T	5	X
品目記号 Product Code	形状、特性 Size, Rating		端子形状 Terminal		抵抗値 Nominal Resistance		抵抗値許容差 R-Tolerance		B定数 B-value		B定数許容差 B-Value Tolerance		包装 Packing		端子メッキ Terminal Plating			
厚膜チップ NTCサーミスタ	1005	0.120W	W コの字電極 Wrap Around		47Ω→47R0 100Ω→101 47KΩ→473 1MΩ→105	F= ± 1% G= ± 2% H= ± 3% J= ± 5% K= ± 10%	345→3450K 370→3700K 410→4100K	F= ± 1% G= ± 2% H= ± 3% J= ± 5%	T5=5Kpcs/reel T10=10Kpcs/reel	X = 錫 X = Sn								

寸法 / Dimensions

形状 Type	Size in Inch	L	W	t	b	包装数量 Q'ty
CTT1005	0402	1.00 ± 0.05	0.50 ± 0.05	0.35 ± 0.05	0.25 +0.05 -0.10	10,000pcs
CTT1608	0603	1.60 ± 0.15	0.80 ± 0.15	0.50 ± 0.10	0.30 ± 0.20	5,000pcs
CTT2012	0805	2.00 ± 0.20	1.25 ± 0.10	0.55 ± 0.10	0.40 ± 0.20	



定格 / Rating

形状 Type	抵抗値許容差 Resistance Tolerance	B定数許容差 B-Value Tolerance	熱放散定数 (気中) Dissipation Factor in Air δ 1.5m W/	熱時定数 (気中) Thermal Time Constant in Air γ 5.0 Sec	最大許容電力 Max. Permissible Power	定格電力 Rated Power (25)	使用温度範囲 Operating Temperature Range
CTT1005	± 1%, ± 2%	± 1%, ± 2% ± 3%, ± 5%	1.1mW/	1.5sec	5mW	110mW	-40 ~ +125
CTT1608	± 3%, ± 5%		1.2mW/	2.0sec		120mW	
CTT2012	± 10%		1.3mW/	2.5sec		130mW	

印字 / Marking

Chip size	E series	Marking	Example
1005	---	No-Marking	
1608	E-24	3 digits	10KΩ : 103
2012	E-24	3 digits	10KΩ : 103

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B定数 / B-Value

B 定数(25 /85) B-value(25 /85)	標準抵抗値範囲(25)		
	CTT2012 (Ω)	CTT1608 (Ω)	CTT1005 (Ω)
4610~4800K	24k~470k	47k~1.6M	75k ~ 820k
4410~4600K	8.2k~430k	15k~910k	24k~470k
4210~4400K	3.0k~91k	6.2k~200k	9.1k~110k
4010~4200K	2.7k~91k	4.7k~200k	7.5k~100k
3810~4000K	1.2k~51k	2.4k~110k	3.6k~62k
3610~3800K	620~27k	1.2k~56k	2k~30k
3410~3600K	620~27k	1.1k~56k	1.8k~30k
3210~3400K	750~18k	1.5k~43k	2.4k~22k
3010~3200K	390~9.1k	750~20k	1.1k~10k
2810~3000K	180~4.3k	360~10k	560~5.1k
2610~2800K	100~2k	160~4.7k	270~2.4k
2410~2600K	47~1k	82~2.2k	120~1.2k

抵抗温度特性 / Resistance Temperature Characteristics

温度 Temp. ()	抵抗値 Resistance (25) / B 定数 B-value (25 /85) unit: Ω									
	R: 1kΩ B: 2750K	R: 1kΩ B: 3000K	R: 1kΩ B: 3200K	R: 10kΩ B: 3450K	R: 10kΩ B: 3700K	R: 10kΩ B: 3900K	R: 10kΩ B: 4100K	R: 100kΩ B: 4300K	R: 100kΩ B: 4500K	R: 100kΩ B: 4700K
-40	11,290	14,270	17,200	217,300	274,600	331,000	399,100	4,812,000	5,802,000	6,995,000
-35	9,012	11,130	13,180	162,800	201,100	238,200	282,000	3,339,000	3,954,000	4,682,000
-30	7,248	8,761	10,200	123,200	149,000	173,400	201,800	2,349,000	2,734,000	3,182,000
-25	5,872	6,953	7,959	94,240	111,600	127,700	146,200	1,674,000	1,916,000	2,193,000
-20	4,791	5,561	6,265	72,720	84,410	95,100	107,100	1,207,000	1,360,000	1,532,000
-15	3,935	4,481	4,971	56,620	64,470	71,530	79,370	880,600	977,100	1,084,000
-10	3,253	3,636	3,975	44,450	49,690	54,330	59,400	649,400	710,000	776,300
-5	2,705	2,971	3,202	35,170	38,630	41,640	44,890	483,900	521,600	562,200
0	2,262	2,443	2,597	28,040	30,280	32,200	34,240	364,000	387,100	411,600
5	1,902	2,020	2,120	22,520	23,920	25,100	26,340	276,400	290,100	304,400
10	1,608	1,681	1,741	18,210	19,040	19,730	20,440	211,800	219,400	227,400
15	1,366	1,406	1,439	14,820	15,260	15,620	15,990	163,600	167,500	171,400
20	1,166	1,183	1,196	12,130	12,310	12,450	12,600	127,400	128,900	130,400
25	1,000	1,000	1,000	10,000	10,000	10,000	10,000	100,000	100,000	100,000
30	861.3	849.5	840.1	8,286	8,172	8,082	7,993	79,050	78,180	77,320
35	745.0	725.0	709.4	6,903	6,718	6,573	6,432	62,930	61,580	60,250
40	647.0	621.5	601.8	5,782	5,554	5,378	5,208	50,400	48,840	47,300
45	564.1	535.1	513.0	4,867	4,617	4,426	4,243	40,680	39,000	37,390
50	493.6	462.6	439.2	4,116	3,858	3,663	3,477	33,020	31,350	29,760
55	433.5	401.5	377.7	3,498	3,240	3,047	2,866	26,950	25,350	23,840
60	382.1	349.9	326.1	2,986	2,734	2,548	2,375	22,130	20,620	19,220
65	337.9	306.0	282.6	2,560	2,318	2,141	1,978	18,270	16,880	15,590
70	299.8	268.6	246.0	2,203	1,974	1,808	1,656	15,160	13,880	12,720
75	266.8	236.5	214.8	1,904	1,688	1,533	1,392	12,650	11,480	10,430
80	238.2	209.00	188.3	1,652	1,450	1,306	1,177	10,600	9,548	8,601
85	213.3	185.3	165.6	1,439	1,251	1,118	998.8	8,927	7,978	7,130
90	191.5	164.8	146.2	1,258	1,083	960.2	851.5	7,552	6,698	5,940
95	172.4	147.0	129.4	1,103	940.9	828.2	729.0	6,417	5,649	4,972
100	155.7	131.5	115.0	971.3	820.6	717.1	626.7	5,476	4,785	4,182
105	140.9	118.00	102.4	857.7	718.3	623.2	540.8	4,692	4,072	3,533
110	127.9	106.2	91.52	759.8	639.0	543.6	468.5	4,037	3,479	2,998
115	116.4	95.82	82.02	675.3	555.9	475.9	407.3	3,486	2,984	2,554
120	106.1	86.68	73.71	601.9	491.5	418.0	355.4	3,022	2,570	2,186
125	97.0	78.61	66.42	538.1	435.9	368.3	311.2	2,630	2,222	1,877