

# NTC Thermistors

## SMD Thermistors



TSM Series

MERITEK

### Features

1. EIA size 0402, 0603, 0805, 1206
2. Highly reliable monolithic structure
3. Wide resistance range
4. Cost effective
5. Agency recognition: UL

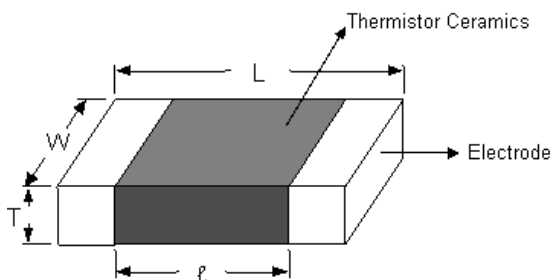
UL E223037



### PART NUMBERING SYSTEM

	TSM	2	A	104	H	39	H	2	R
<b>Meritek Series</b>									
<b>Size</b>									
CODE	1	2							
	0603	0805							
<b>Beta Value</b>									
CODE	A	B							
	B <sub>25/85</sub>	B <sub>25/50</sub>							
<b>Part No. (R25)</b>									
CODE	102	103							
	1K	10K							
<b>Tolerance of Resistor</b>									
CODE	F	G	H	J	K				
(%)	±1	±2	±3	±5	±10				
<b>Beta Value—first 2 digits</b>									
CODE	30	31	...	39	40	41	...		
	30	31	...	39	40	41	...		
<b>Beta Value—last 2 digits</b>									
CODE	0	A	1	2	D	...	5	F	...
	00	05	10	...	20	35	...	50	55
									H
									75
									75
<b>Tolerance of Beta Value</b>									
CODE	1	2	3	...					
(%)	±1	±2	±3	...					
<b>Standard Packaging</b>									
CODE	R	B							
	Reel	Bulk							

### Dimensions



Part no.	Size	L nor.	W nor.	T max.	ℓ min.
TSM0	0402	1.00±0.15	0.50±0.10	0.60	0.2
TSM1	0603	1.60±0.15	0.80±0.15	0.95	0.3
TSM2	0805	2.00±0.20	1.25±0.20	1.20	0.4
TSM3	1206	3.20±0.30	1.60±0.20	1.50	0.5

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### Electrical Characteristics

Part No.	Zero Power Resistance at 25°C	Tolerance of R <sub>25</sub>	B Value		Tolerance of B value	Max. Power Rating at 25°C	Dissipation Factor	Thermal Time Constant	Operating Temperature Range	Safety Approvals	
	R <sub>25</sub> (KΩ)	(±%)	(K)		(±%)	P <sub>max</sub> (mW)	δ(mW/°C)	τ(Sec.)	T <sub>L</sub> ~T <sub>U</sub> (°C)	UL	
TSM0A103 <sup>^</sup> 34D*	10	1、2、3 5、10	25/85	3435	1、2、3	170	Approx. 1.7	Approx. 2	-40 ~ +125		
TSM0A103 <sup>^</sup> 391*	10			3910							
TSM0A223 <sup>^</sup> 393*	22			3930							
TSM0A333 <sup>^</sup> 393*	33			3930							
TSM0A473 <sup>^</sup> 393*	47			3930							
TSM0A503 <sup>^</sup> 395*	50			3950							
TSM0A683 <sup>^</sup> 405*	68			4050							
TSM0A104 <sup>^</sup> 39H*	100			3975							
TSM0A224 <sup>^</sup> 405*	220			4050							
TSM0A474 <sup>^</sup> 409*	470			4090							
TSM0B474 <sup>^</sup> 470*	470	5、10	25/50	4700	2、3						
TSM1A202 <sup>^</sup> 340*	2	1、2、3、 5、10	25/85	3400							
TSM1A222 <sup>^</sup> 34D*	2.2			3435							
TSM1B222 <sup>^</sup> 395*	2.2	5、10	25/50	3950							
TSM1A472 <sup>^</sup> 34D*	4.7	1、2、3、 5、10	25/85	3435						√	
TSM1A472 <sup>^</sup> 367*	4.7			3670						√	
TSM1A502 <sup>^</sup> 34D*	5			3435						√	
TSM1A682 <sup>^</sup> 34D*	6.8			3435							
TSM1A682 <sup>^</sup> 430*	6.8	5、10		4300							
TSM1A103 <sup>^</sup> 34D*	10	1、2、3、 5、10	25/85	3435	1、2、3	210	Approx 2.1	Approx 3.1	-40~+125	√	
TSM1A103 <sup>^</sup> 39H*	10			3975						√	
TSM1B103 <sup>^</sup> 425*	10			25/50						4250	
TSM1A123 <sup>^</sup> 380*	12									3800	
TSM1A153 <sup>^</sup> 395*	15									3950	
TSM1A223 <sup>^</sup> 39H*	22									3975	
TSM1A333 <sup>^</sup> 39H*	33									3975	
TSM1A473 <sup>^</sup> 39H*	47									3975	
TSM1A503 <sup>^</sup> 39H*	50									3975	
TSM1A683 <sup>^</sup> 39H*	68									3975	
TSM1A104 <sup>^</sup> 405*	100		4050								
TSM1B104 <sup>^</sup> 425*	100	25/50	4250								
TSM1A104 <sup>^</sup> 436*	100		4360								
TSM1A154 <sup>^</sup> 406*	150		4060								
TSM1A204 <sup>^</sup> 410*	200		4100								
TSM1A224 <sup>^</sup> 410*	220	25/85	4100								
TSM1A334 <sup>^</sup> 415*	330		4150								
TSM1A474 <sup>^</sup> 410*	470		4100								
TSM1B474 <sup>^</sup> 446*	470	25/50	4460								

Note 1: ^ = Tolerance of R<sub>25</sub>

Note 2: \* = Tolerance of B value

\*Special specification are available upon request

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	R <sub>25</sub> (KΩ)	(±%)	(K)	(±%)	P <sub>max</sub> (mW)	δ(mW/°C)	τ(Sec.)	T <sub>L</sub> ~T <sub>U</sub> (°C)	UL		
TSM2A102^320*	1	1、2、3、5、10	25/85	3200	1、2、3	240	Approx 3.2	Approx 5.4	-40~+125	√	
TSM2A472^34D*	4.7			3435							
TSM2A502^34D*	5			3435							
TSM2A682^34D*	6.8			3435							
TSM2A103^34D*	10			3435							
TSM2A103^380*	10			3800							√
TSM2A103^39H*	10			3975							√
TSM2A153^395*	15			3950							
TSM2A203^395*	20			3950							
TSM2A223^380*	22			3800							
TSM2A223^39H*	22			3975							
TSM2A303^39H*	30			3975							
TSM2A473^39H*	47			3975							√
TSM2A503^39H*	50			3975							√
TSM2A683^39H*	68			3975							
TSM2A104^405*	100	4050		√							
TSM2A204^410*	200	4100	1、2、3	240	Approx 3.2	Approx 5.4	-40~+125	√			
TSM2A224^410*	220	4100									
TSM3A472^34D*	4.7	1、2、3、5、10	25/85	3435	1、2、3	320	Approx 3.2	Approx 6.7	-40~+125		
TSM3A502^34D*	5			3435							
TSM3A103^34D*	10			3435							
TSM3A103^39H*	10			3975							
TSM3A223^39H*	22			3975							
TSM3A473^39H*	47			3975							
TSM3A503^39H*	50			3975							
TSM3A683^39H*	68			3975							
TSM3A104^405*	100			4050							
TSM3A204^410*	200			4100							
TSM3A224^410*	220			4100							
TSM3A474^425*	470			4250							

Note 1: ^ = Tolerance of R<sub>25</sub>

Note 2: \* = Tolerance of B value

\*Special specification are available upon request