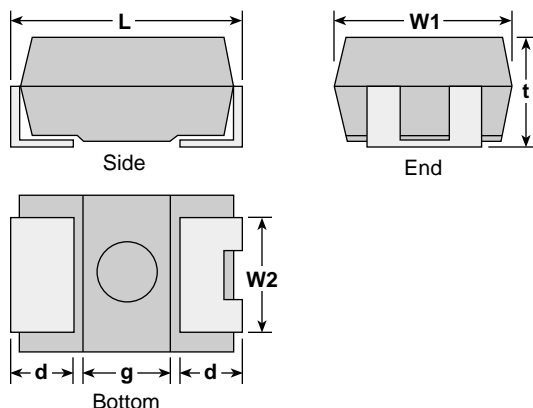


## features

- Epoxy molded body, UL94V0 flammability
- EIA-US and EIA-Japan compatible sizes
- 100% burn-in and end-of-line testing
- Extended values per case size
- Excellent humidity and solder resistance
- Marking: Black body color with white marking
- Products with lead-free terminations meet RoHS requirements

## dimensions and construction



Case Size (Inch Size Code)	Dimensions inches (mm)					
	L	W1	W2	t	d	g
<b>P</b> (2012)	.079±.008 (2.0±0.2)	.049±.008 (1.25±0.2)	.035±.004 (0.9±0.1)	.047 Max. (1.2 Max.)	.020±.012 (0.5±0.3)	.031 Min. (0.8 Min.)
<b>A</b> (3216)	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.047±.008 (1.2±0.2)	.063±.008 (1.6±0.2)	.028±.012 (0.7±0.3)	.055±.008 (1.4±0.2)
<b>B</b> (3528)	.138±.008 (3.5±0.2)	.110±.008 (2.8±0.2)	.087±.008 (2.2±0.2)	.073±.008 (1.9±0.2)	.031±.012 (0.8±0.3)	.055±.008 (1.4±0.2)
<b>C</b> (6032)	.236±.012 (6.0±0.3)	.126±.008 (3.2±0.2)	.087±.008 (2.2±0.2)	.098±.008 (2.5±0.2)	.051±.012 (1.3±0.3)	.094±.008 (2.4±0.2)
<b>E</b> (EIA-D)	.287±.012 (7.3±0.3)	.169±.012 (4.3±0.3)	.094±.004 (2.4±0.1)	.110±.008 (2.8±0.2)	.051±.012 (1.3±0.3)	.15±.008 (3.8±0.2)

## ordering information

New Part #	TMC	1E	C	T	TE	475	M	R
Type		Voltage Code	Case Size	Termination Material	Packaging	Nominal Capacitance	Tolerance	Polarity Orientation
		0G: 4V 0J: 7V 1A: 10V 1C: 16V 1D: 20V 1E: 25V 1V: 35V	P: 2012 A: 3216 B: 3528 C: 6032 E: EIA-D	T: Sn	TE: 7" embossed plastic	Reference capacitance ranges and case sizes chart	K: ±10% M: ±20%	

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

## capacitance ranges and case sizes

### Standard Range

STANDARD VALUES VOLTAGE CODE		0J	1A	1C	1D	1E	1V
85°C	Rated Voltage (VDC)	7	10	16	20	25	35
	Surge Voltage (VDC)	9	13	20	26	32	46
125°C	Derated Voltage (VDC)	4	6.3	10	13	16	23
Capacitance (μF)	Capcode						
0.1	104						A
0.15	154						
0.22	224						
0.33	334						
0.47	474					A	
0.68	684						
1.0	105		A				B
1.5	155						
2.2	225			B			
3.3	335		B				
4.7	475	B				C	
6.8	685						
10	106		C				
15	156						
22	226						
33	336						
47	476						
68	686						

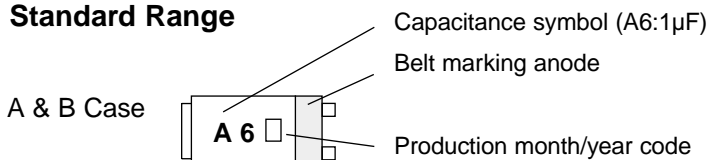
### Extended Range

STANDARD VALUES VOLTAGE CODE		0G	0J	1A	1C	1D	1E	1V
85°C	Rated Voltage (VDC)	4	7	10	16	20	25	35
	Surge Voltage (VDC)	5	9	13	20	26	32	46
125°C	Derated Voltage (VDC)	2.5	4	6.3	10	13	16	23
Capacitance (μF)	Capcode							
.047	473							
.068	683							
.1	104					P		
.15	154							
.22	224					P		
.33	334							
.47	474							A
.68	684						A	
1.0	105				P	A		A
1.5	155				A			A,B
2.2	225			A,P	A	A	A,B	B
3.3	335		A	A,P	A	A	A,B	B
4.7	475		A,P	A,P	A,B,P	A,B	B	C
6.8	685		A,P	A,P	A,B	B		
10	106		A,P	A,B,P	A,B	B	C	C
15	156		A,P	A	A,B			
22	226	A,B,P	A,B,P	A,B	B,C	C		E
33	336	A,P	A,B	A,B	B,C			
47	476	A,B,P	A,B,C	B,C	C,E			
68	686		A,B	C				
100	107	A	A,B,C		E			
150	157							
220	227	A,B,C	B,C	E				
330	337		E					
470	477		E					

\* Special capacitance/voltage combinations available, contact factory for details

## part marking

### Standard Range



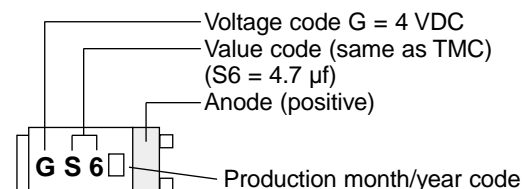
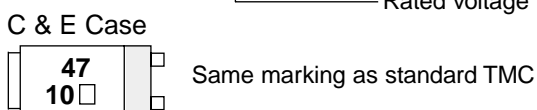
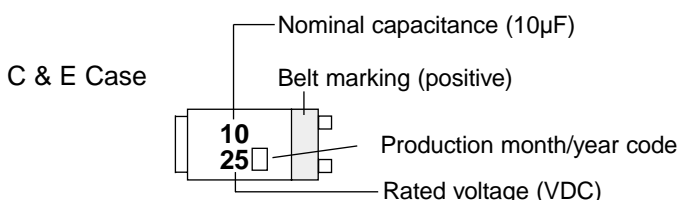
Value (μf)	.1	.15	.22	.33	.47	.68	1.0	1.5	2.2	3.3	4.7	6.8	10.0
Marking	A5	E5	J5	N5	S5	W5	A6	E6	J6	N6	S6	W6	A7

### Lot Number Symbol

Lot number symbol is expressed "a" as January 1999 as a starting month and year in an alphabetical order and in a small letter to a capital (Letters of I, i, O, and o are excluded)

		Month											
Year		1	2	3	4	5	6	7	8	9	10	11	12
	2002	N	P	Q	R	S	T	U	V	W	X	Y	Z
	2003	a	b	c	d	e	f	g	h	j	k	l	m
	2004	n	p	q	r	s	t	u	v	w	x	y	z
	2005	A	B	C	D	E	F	G	H	J	K	L	M

### Extended Range



### A, B & P Case

Voltage	2.5	4	7	10	16	20	25	35
Marking	e	G	J	A	C	D	E	V