SOLID-ELECTROLYTE TANTALUM CAPACITORS

(TANCHIP® SERIES)

2007.11

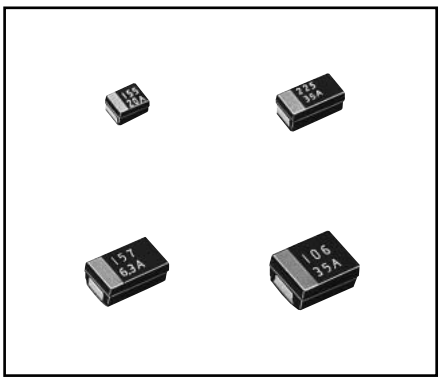
RoHS COMPLIANT

TYPE 269

Epoxy resin molding chip
Built-in fuse

⚠ CAUTIONS

- This capacitor is polarized, do not apply reverse voltage.
- The sum of peak value of AC and DC voltage should not exceed the rated voltage.
- Information in this catalog is subject to change without prior notice. Please inquire of us to confirm specifications prior to use.



Type 269 is built-in fuse chip tantalum capacitors based on Type 267.

FEATURES

1. With built-in fuse that blows out to prevent smoking and ignition of capacitor when overcurrent flows.
2. Suitable for filtering of supply with low impedance circuit and by-passing of random noise of source line in ultra high speed logical circuit.
3. Suitable for surface mounting.
4. Dimensional accuracy and symmetrical terminal structure suitable for high-density mounting ensures excellent “Self-Alignment”.
5. Meet the demand for resistance to soldering heat by 260°C for 10 seconds dipping. Also, meet reflow and flow soldering.

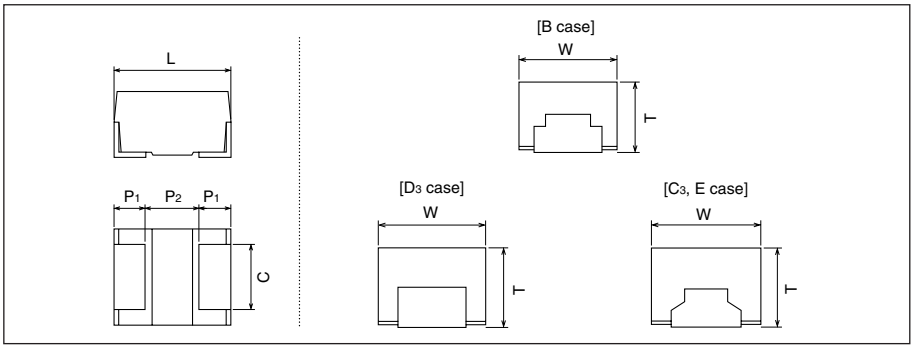
NOTIFICATIONS FOR USE

Prior to use, please refer to Application Notes (G-000-001G-Ta01) for Tantalum Solid Electrolytic Capacitors.

CHARACTERISTICS

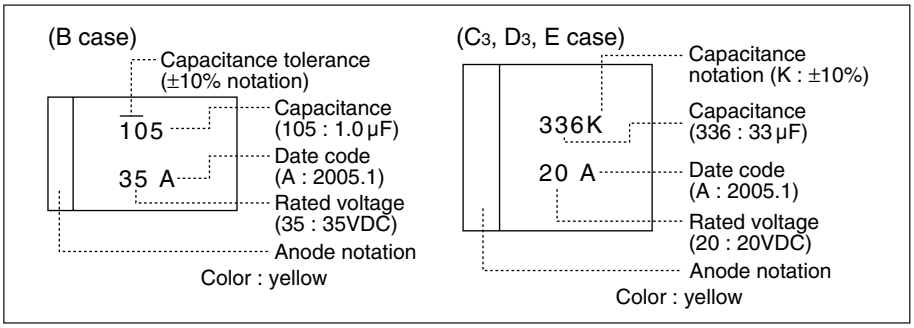
ITEM	CHARACTERISTICS
Failure rate level	1%/1000h
Category temperature range	−55～+125°C (+85～+125°C : Voltage derating is required.)
Rated voltage	6.3−10−16−20−25−35−50VDC
Capacitance range	0.15～150 µF
Capacitance tolerance	±10%, ±20%

DIMENSIONS mm



Case Code	EIA Code	L±0.2	W±0.2	T±0.2	P1±0.2	P2 min.	C±0.1
B	3528	3.5	2.8	1.9	0.8	1.5	2.2
C3	6032	6.0	3.2	2.5	1.3	3.0	2.2
D3	7343	7.3	4.4	2.8	1.3	4.0	2.4
E	7257	7.3	5.8	3.5	1.3	4.0	3.5

MARKING



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■ STANDARD RATINGS

R.V.(VDC) / Cap.(μF)	6.3	10	16	20	25	35	50
0.15							B
0.22							B
0.33							B
0.47							*B, C3
0.68							C3
1.0					B	B,C3	C3
1.5				B	B	C3	*C3, D3
2.2			B	B		C3	D3
3.3			B	*B	C3	C3, D3	*D3
4.7		B	*B	C3	C3	D3	
6.8		*B	C3	C3	D3	D3,E	
10	*B	*B, C3	*B, C3	*C3, D3	D3	E	
15		C3	*B, D3	*C3, D3	*C3, E	E	
22		D3	*C3, D3	*D3, E	E		
33		*C3, D3	*D3, E	E			
47	*C3	*B, *D3	*D3, E				
68	*D3	*D3, E	*E				
100	*D3, E	*D3, *E					
150	*D3						

* 269E Series.

RATINGS AND CATALOG NUMBERS

	Catalog number(1)(2)	cap. (μF)	case code	Max DC Lct. (μA)			Max Dissipation factor				Max ESR(Ω)
				20°C	85°C	125°C	–55°C	20°C	85°C	125°C	10kHz
Rated voltage 6.3VDC/Surge voltage 8VDC	269E 6301 106 □1□2	10	B	0.6	6	7.9	0.08	0.06	0.06	0.08	3.0
	269E 6301 476 □1□2 720	47	C3	3.0	30	37	0.08	0.06	0.06	0.08	1.2
	269E 6301 686 □1□2 720	68	D3	4.3	43	54	0.08	0.06	0.06	0.08	1.0
	269E 6301 107 □1□2 720	100	D3	6.3	63	79	0.15	0.08	0.08	0.10	1.0
	269M 6301 107 □1□2 720	100	E	6.3	63	79	0.10	0.08	0.08	0.08	0.7
	269E 6301 157 □1□2 734	150	D3	9.5	95	118	0.15	0.08	0.08	0.10	1.0
Rated voltage 10VDC/Surge voltage 13VDC	269M 1002 475 □1□2	4.7	B	0.5	5	6.3	0.08	0.06	0.06	0.06	3.0
	269E 1002 685 □1□2	6.8	B	0.7	7	8.5	0.08	0.06	0.06	0.08	3.0
	269E 1002 106 □1□2	10	B	1.0	10	13	0.08	0.06	0.06	0.08	3.0
	269M 1002 106 □1□2 720	10	C3	1.0	10	13	0.08	0.06	0.06	0.06	1.2
	269M 1002 156 □1□2 720	15	C3	1.5	15	19	0.08	0.06	0.06	0.06	1.2
	269M 1002 226 □1□2 720	22	D3	2.2	22	28	0.08	0.06	0.06	0.06	1.0
	269E 1002 336 □1□2 720	33	C3	3.3	33	41	0.08	0.06	0.06	0.08	1.2
	269M 1002 336 □1□2 720	33	D3	3.3	33	41	0.08	0.06	0.06	0.06	1.0
	269E 1002 476 □1□2	47	B	4.7	47	59	0.18	0.12	0.12	0.14	3.0
	269E 1002 476 □1□2 720	47	D3	4.7	47	59	0.08	0.06	0.06	0.08	1.0
	269E 1002 686 □1□2 720	68	D3	6.8	68	85	0.08	0.06	0.06	0.08	1.0
	269M 1002 686 □1□2 720	68	E	6.7	67	85	0.08	0.06	0.06	0.06	0.7
	269E 1002 107 □1□2 734	100	D3	10	100	130	0.15	0.08	0.08	0.10	1.0
	269E 1002 107 M □2 720	100	E	10	100	125	0.10	0.08	0.08	0.08	0.7
Rated voltage 16VDC/Surge voltage 20VDC	269M 1602 225 □1□2	2.2	B	0.5	5	6.3	0.08	0.06	0.06	0.06	3.0
	269M 1602 335 □1□2	3.3	B	0.5	5	6.3	0.08	0.06	0.06	0.06	3.0
	269E 1602 475 □1□2	4.7	B	0.8	8	9.4	0.08	0.06	0.06	0.08	3.0
	269M 1602 685 □1□2 720	6.8	C3	1.1	11	14	0.08	0.06	0.06	0.06	1.2
	269E 1602 106 □1□2	10	B	1.6	16	20	0.08	0.06	0.06	0.08	3.0
	269M 1602 106 □1□2 720	10	C3	1.6	16	20	0.08	0.06	0.06	0.06	1.2
	269E 1602 156 □1□2	15	B	2.4	24	30	0.12	0.08	0.08	0.10	3.0
	269M 1602 156 □1□2 720	15	D3	2.4	24	30	0.08	0.06	0.06	0.06	1.0
	269E 1602 226 □1□2 720	22	C3	3.5	35	44	0.08	0.06	0.06	0.08	1.2
	269M 1602 226 □1□2 720	22	D3	3.5	35	44	0.08	0.06	0.06	0.06	1.0
	269E 1602 336 □1□2 720	33	D3	5.3	53	66	0.08	0.06	0.06	0.08	1.0
	269M 1602 336 □1□2 720	33	E	5.3	53	66	0.08	0.06	0.06	0.06	0.7
	269E 1602 476 □1□2 720	47	D3	7.5	75	94	0.08	0.06	0.06	0.08	1.0
	269M 1602 476 □1□2 720	47	E	7.5	75	94	0.08	0.06	0.06	0.06	0.7
	269E 1602 686 □1□2 720	68	E	11	109	136	0.10	0.08	0.08	0.08	0.7

□1 capacitance tolerance code "K" (±10%) or "M" (±20%)
□2 taping code "R" ("N") or "L" ("P")
Pull direction "R" ("N") is standard.

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RATINGS AND CATALOG NUMBERS

	Catalog number(1)(2)	cap. (μF)	case code	Max DC Lct. (μA)			Max Dissipation factor				Max ESR(Ω)
				20°C	85°C	125°C	–55°C	20°C	85°C	125°C	10kHz
Rated voltage 20VDC/Surge voltage 26VDC	269M 2002 155 □[1]□[2]	1.5	B	0.5	5	6.3	0.08	0.06	0.06	0.06	3.0
	269M 2002 225 □[1]□[2]	2.2	B	0.5	5	6.3	0.08	0.06	0.06	0.06	3.0
	269E 2002 335 □[1]□[2]	3.3	B	0.7	7	8.3	0.08	0.06	0.06	0.08	3.0
	269M 2002 475 □[1]□[2] 720	4.7	C3	0.9	9	12	0.08	0.06	0.06	0.06	1.2
	269M 2002 685 □[1]□[2] 720	6.8	C3	1.4	14	17	0.08	0.06	0.06	0.06	1.2
	269E 2002 106 □[1]□[2] 720	10	C3	2.0	20	25	0.08	0.06	0.06	0.08	1.2
	269M 2002 106 □[1]□[2] 720	10	D3	2.0	20	25	0.08	0.06	0.06	0.06	1.0
	269E 2002 156 □[1]□[2] 720	15	C3	3.0	30	38	0.08	0.06	0.06	0.08	1.2
	269M 2002 156 □[1]□[2] 720	15	D3	3.0	30	38	0.08	0.06	0.06	0.08	1.5
	269E 2002 226 □[1]□[2] 720	22	D3	4.4	44	55	0.08	0.06	0.06	0.08	1.0
	269M 2002 226 □[1]□[2] 720	22	E	4.4	44	55	0.08	0.06	0.06	0.06	0.7
	269M 2002 336 □[1]□[2] 720	33	E	6.6	66	83	0.08	0.06	0.06	0.06	1.0
Rated voltage 25VDC/Surge voltage 32VDC	269M 2502 105 □[1]□[2]	1.0	B	0.5	5	6.3	0.05	0.04	0.04	0.05	3.0
	269M 2502 155 □[1]□[2]	1.5	B	0.5	5	6.3	0.08	0.06	0.06	0.06	3.0
	269M 2502 335 □[1]□[2] 720	3.3	C3	0.8	8	9.6	0.08	0.06	0.06	0.06	1.2
	269M 2502 475 □[1]□[2] 720	4.7	C3	1.2	12	15	0.08	0.06	0.06	0.06	1.2
	269M 2502 685 □[1]□[2] 720	6.8	D3	1.7	17	21	0.08	0.06	0.06	0.06	1.0
	269M 2502 106 □[1]□[2] 720	10	D3	2.5	25	31	0.08	0.06	0.06	0.08	1.5
	269E 2502 156 □[1]□[2] 734	15	C3	3.8	38	47	0.10	0.08	0.08	0.10	1.4
	269M 2502 156 □[1]□[2] 720	15	E	3.8	38	47	0.08	0.06	0.06	0.06	0.7
	269M 2502 226 □[1]□[2] 720	22	E	5.5	55	69	0.08	0.06	0.06	0.06	1.0
Rated voltage 35VDC/Surge voltage 44VDC	269M 3502 105 □[1]□[2]	1.0	B	0.5	5	6.3	0.05	0.04	0.04	0.05	3.0
	269M 3502 105 □[1]□[2] 720	1.0	C3	0.5	5	6.3	0.05	0.04	0.04	0.05	3.0
	269M 3502 155 □[1]□[2] 720	1.5	C3	0.5	5	6.6	0.08	0.06	0.06	0.06	1.2
	269M 3502 225 □[1]□[2] 720	2.2	C3	0.8	8	9.6	0.08	0.06	0.06	0.06	1.2
	269M 3502 335 □[1]□[2] 734	3.3	C3	1.2	12	14	0.08	0.06	0.06	0.06	1.2
	269M 3502 335 □[1]□[2] 720	3.3	D3	1.2	12	14	0.08	0.06	0.06	0.06	1.0
	269M 3502 475 □[1]□[2] 720	4.7	D3	1.6	16	21	0.08	0.06	0.06	0.06	1.0
	269M 3502 685 □[1]□[2] 734	6.8	D3	2.4	24	30	0.08	0.06	0.06	0.08	1.5
	269M 3502 685 □[1]□[2] 720	6.8	E	2.4	24	30	0.08	0.06	0.06	0.06	0.7
	269M 3502 106 □[1]□[2] 720	10	E	3.5	35	44	0.08	0.06	0.06	0.06	0.7
	269M 3502 156 □[1]□[2] 720	15	E	5.3	53	66	0.08	0.06	0.06	0.06	1.0
Rated voltage 50VDC/Surge voltage 63VDC	269M 5002 154 □[1]□[2]	0.15	B	0.5	5	6.3	0.05	0.04	0.04	0.05	5.0
	269M 5002 224 □[1]□[2]	0.22	B	0.5	5	6.3	0.05	0.04	0.04	0.05	5.0
	269M 5002 334 □[1]□[2]	0.33	B	0.5	5	6.3	0.05	0.04	0.04	0.05	3.0
	269E 5002 474 □[1]□[2]	0.47	B	0.5	5	6.3	0.06	0.04	0.04	0.06	3.0
	269M 5002 474 □[1]□[2] 720	0.47	C3	0.5	5	6.3	0.05	0.04	0.04	0.05	3.0
	269M 5002 684 □[1]□[2] 720	0.68	C3	0.5	5	6.3	0.05	0.04	0.04	0.05	3.0
	269M 5002 105 □[1]□[2] 720	1.0	C3	0.5	5	6.3	0.05	0.04	0.04	0.05	3.0
	269E 5002 155 □[1]□[2] 720	1.5	C3	0.8	8	9.4	0.08	0.06	0.06	0.08	1.2
	269M 5002 155 □[1]□[2] 720	1.5	D3	0.8	8	9.4	0.08	0.06	0.06	0.06	1.5
	269M 5002 225 □[1]□[2] 720	2.2	D3	1.1	11	14	0.08	0.06	0.06	0.06	1.5
	269E 5002 335 □[1]□[2] 720	3.3	D3	1.7	17	21	0.08	0.06	0.06	0.08	1.0

□[1] capacitance tolerance code "K" (±10%) or "M" (±20%)
□[2] taping code "R" ("N") or "L" ("P")
Pull direction "R" ("N") is standard.

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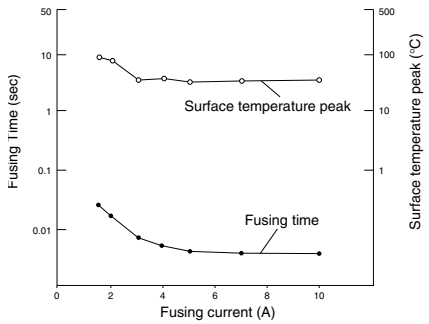
Epoxy resin molding chip
Built-in fuse

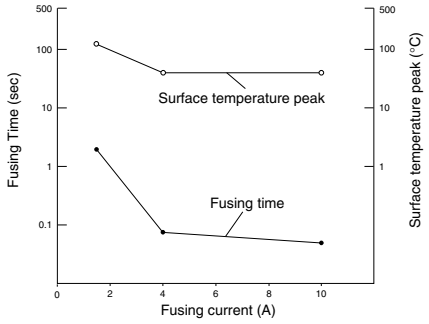
■ Fusing characteristics

Fusing characteristics showed on the drawing is one of examples. They vary according to conditions. Please inquire of our Sales Department about details.

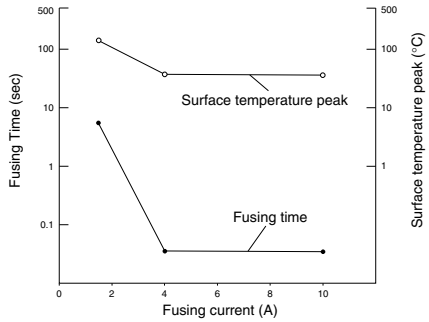
(Case code B) 16V 3.3 µF



(Case code C3) 16V 10 µF



(Case code D3) 16V 22 µF



(Case code E) 10V 68 µF