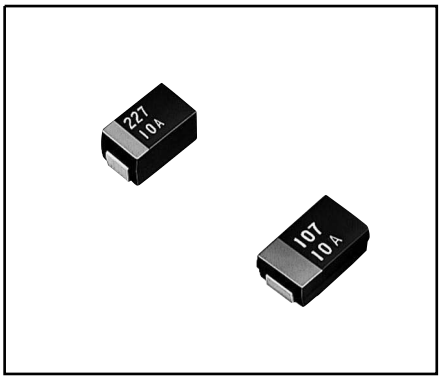
SOLID-ELECTROLYTE TANTALUM CAPACITORS
(TANCHIP® SERIES)

TYPE 281
Epoxy resin molding chip
Ultra Low ESR

⚠ 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.
- This catalog is designed for providing general information. Please inquire of our Sales Department to confirm specifications prior to use.



Type 281 is Ultra Low ESR series based on Type 267.

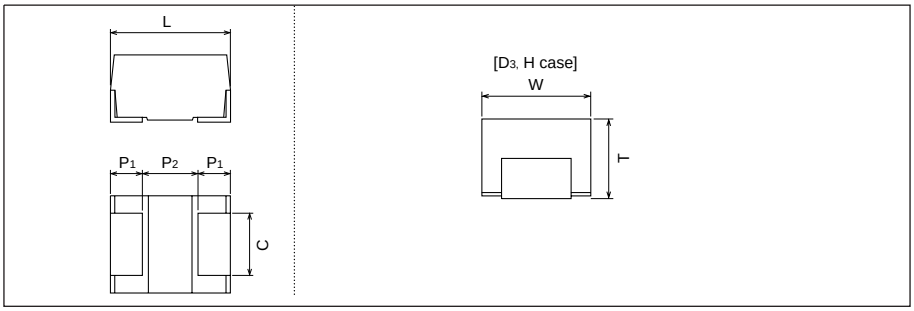
FEATURES
1. Suitable for surface mounting.
2. Precise dimensions allow high density packaging. Symmetrical construction of positive and negative terminals provides “Self Alignment”.
3. Soldering: 260°C for 10 second by re-flow or flow soldering.
4. This type is suitable for medium to high frequency circuit as high speed PC, switching regulators, DC/DC convertor for high quality voltage source, etc.

NOTIFICATIONS FOR USE
Please inquire of our Sales Department for your suitable soldering or cleaning conditions.

CHARACTERISTICS

ITEM	CHARACTERISTICS
Failure rate level	1%/1000h
Operating temperature range	−55～+85°C to +125°C with voltage derating
Rated voltage	4−6.3−10−16−20−25−35VDC
Capacitance range	4.7～330μF
Capacitance tolerance	±10%, ±20%

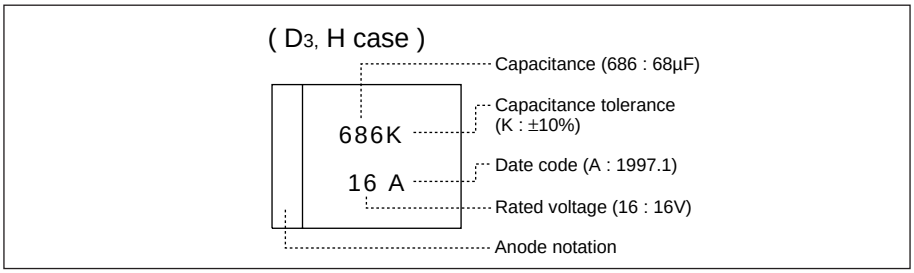
DIMENSIONS mm



Case code	EIA code	L±0.2	W±0.2	T±0.2	P1±0.2	P2 min.	C±0.1
D3	7343	7.3	4.4	2.8	1.3	4.0	2.4
H	7343H	7.3	4.4	4.1	1.3	4.0	2.4

D3 Case is in conformity with EIA-535BAAC.

MARKING



STANDARD RATINGS

R.V. / Cap.	4	6.3	10	16	20	25	35
4.7							D3
6.8							D3
10							D3
15						D3	H
22					D3	D3,H	H
33				D3	D3,H	H	
47			D3	D3,H			
68		D3	D3,H		H		
100	D3	D3	D3,H	H			
150	D3	D3	H				
220	D3	H	H				
330		H					

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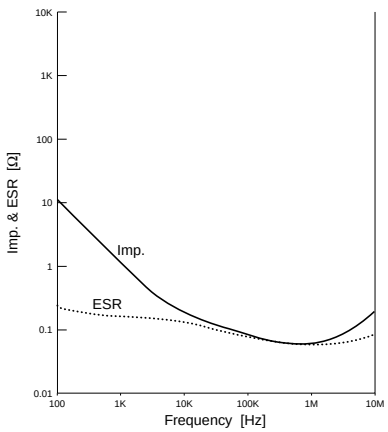
RATINGS AND CATALOG NUMBERS

	Catalog number				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	100kHz
Rated voltage 4VDC/Surge voltage 5VDC	281M	4001	107	□[1]□[2]	100	D3	4.0	40	50	0.10	0.08	0.08	0.08	0.200
	281E	4001	157	□[1]□[2]	150	D3	6.0	60	75	0.10	0.08	0.08	0.08	0.100
	281E	4001	227	□[1]□[2]	220	D3	8.8	88	110	0.15	0.08	0.08	0.10	0.100
Rated voltage 6.3VDC/Surge voltage 8VDC	281M	6301	686	□[1]□[2]	68	D3	4.3	43	54	0.08	0.06	0.06	0.06	0.200
	281E	6301	107	□[1]□[2]	100	D3	6.3	63	79	0.10	0.08	0.08	0.08	0.100
	281E	6301	157	□[1]□[2]	150	D3	9.5	95	118	0.15	0.08	0.08	0.10	0.100
	281E	6301	227	□[1]□[2]	220	H	14	139	173	0.15	0.08	0.08	0.10	0.100
	281E	6301	337	□[1]□[2]	330	H	21	208	260	0.15	0.08	0.08	0.10	0.100
Rated voltage 10VDC/Surge voltage 13VDC	281M	1002	476	□[1]□[2]	47	D3	4.7	47	59	0.08	0.06	0.06	0.06	0.200
	281E	1002	686	□[1]□[2]	68	D3	6.8	68	85	0.08	0.06	0.06	0.08	0.175
	281M	1002	686	□[1]□[2]	68	H	6.8	68	85	0.08	0.06	0.06	0.06	0.150
	281E	1002	107	□[1]□[2]	100	D3	10	100	130	0.15	0.08	0.08	0.10	0.100
	281M	1002	107	□[1]□[2]	100	H	10	100	125	0.10	0.08	0.08	0.08	0.100
	281E	1002	157	□[1]□[2]	150	H	15	150	188	0.15	0.08	0.08	0.10	0.100
	281E	1002	227	□[1]□[2]	220	H	22	220	275	0.15	0.08	0.08	0.10	0.100
Rated voltage 16VDC/Surge voltage 20VDC	281M	1602	336	□[1]□[2]	33	D3	5.3	53	66	0.08	0.06	0.06	0.06	0.225
	281E	1602	476	□[1]□[2]	47	D3	7.5	75	94	0.08	0.06	0.06	0.08	0.150
	281M	1602	476	□[1]□[2]	47	H	7.5	75	94	0.08	0.06	0.06	0.06	0.150
	281E	1602	107	□[1]□[2]	100	H	16	160	200	0.15	0.08	0.08	0.10	0.100
Rated voltage 20VDC/Surge voltage 26VDC	281M	2002	226	□[1]□[2]	22	D3	4.4	44	55	0.08	0.06	0.06	0.06	0.225
	281E	2002	336	□[1]□[2]	33	D3	6.6	66	83	0.08	0.06	0.06	0.08	0.200
	281M	2002	336	□[1]□[2]	33	H	6.6	66	83	0.08	0.06	0.06	0.06	0.200
	281E	2002	686	□[1]□[2]	68	H	14	136	170	0.08	0.06	0.06	0.08	0.150
Rated voltage 25VDC/Surge voltage 32VDC	281M	2502	156	□[1]□[2]	15	D3	3.8	38	47	0.08	0.06	0.06	0.06	0.275
	281E	2502	226	□[1]□[2]	22	D3	5.5	55	69	0.08	0.06	0.06	0.08	0.200
	281M	2502	226	□[1]□[2]	22	H	5.5	55	69	0.08	0.06	0.06	0.06	0.200
	281M	2502	336	□[1]□[2]	33	H	8.3	83	103	0.08	0.06	0.06	0.06	0.225
Rated voltage 35VDC/Surge voltage 44VDC	281M	3502	475	□[1]□[2]	4.7	D3	1.6	16	21	0.08	0.06	0.06	0.06	0.400
	281M	3502	685	□[1]□[2]	6.8	D3	2.4	24	30	0.08	0.06	0.06	0.06	0.350
	281M	3502	106	□[1]□[2]	10	D3	3.5	35	44	0.08	0.06	0.06	0.06	0.300
	281M	3502	156	□[1]□[2]	15	H	5.3	55	66	0.08	0.06	0.06	0.06	0.225
	281M	3502	226	□[1]□[2]	22	H	7.7	77	96	0.08	0.06	0.06	0.06	0.250

□[1] capacitance tolerance code “K” (±10%) or “M” (±20%)
□[2] taping code “R” (“N”) or “L” (“P”)
Pull direction “R” (“N”) is standard.
∗ Please contact our Sales Department if you have requirements for lower ESR.

FREQUENCY CHARACTERISTICS

H Case 10V 150μF



H Case 10V 220μF