

TS13AQ

FEATURES

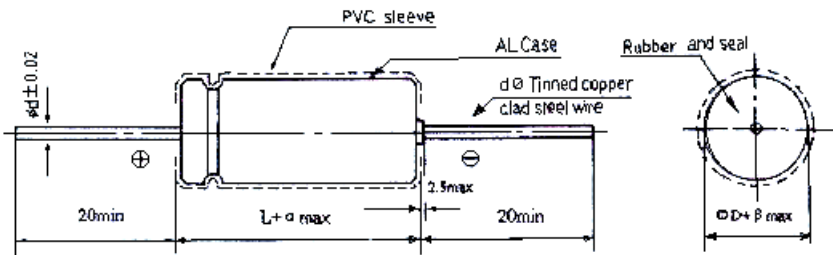
- 160~450V Rated Voltage, Wide operating temperature range, from -40℃ to +105℃.
- Excellent temperature performance.
- Suitable to use for industrial.



I T E M	C H A R A C T E R I S T I C																					
Operating Temperature Range	-40℃ ~ +105℃																					
Capacitance Tolerance	±10%, ±20% (at 20℃ 120Hz)																					
Leakage Current	I = 0.03CV + 15 (μA) (CV≤1000) I = 0.02CV + 25 (μA) (CV>1000) (after 5 minutes applying the rated DC working voltage at 20℃) where: C= rated capacitance in μF. V = rated DC working voltage in V.																					
Dissipation Factor (Tanδ) (At 20℃ , 120 Hz)	<table><tr><td>Rated voltage (V)</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td></tr><tr><td>Tan δ</td><td>0.15</td><td>0.15</td><td>0.20</td><td>0.20</td><td>0.24</td><td>0.24</td></tr></table> For capacitors whose capacitance exceeds 1,000μF, the specification of tanδ is increased by 0.02 for every addition of 1,000μF.	Rated voltage (V)	160	200	250	350	400	450	Tan δ	0.15	0.15	0.20	0.20	0.24	0.24							
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Low Temperature Characteristics	Impedance ratio at 120Hz. <table><tr><td>Rated voltage (V)</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td></tr><tr><td>Z (-25℃) / Z (+20℃)</td><td>3</td><td>6</td><td>8</td><td>12</td><td>14</td><td>16</td></tr><tr><td>Z (-40℃)/ Z (+20℃)</td><td>4</td><td>8</td><td>10</td><td></td><td></td><td></td></tr></table>	Rated voltage (V)	160	200	250	350	400	450	Z (-25℃) / Z (+20℃)	3	6	8	12	14	16	Z (-40℃)/ Z (+20℃)	4	8	10			
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Load Life	After 1000 hours application of rated voltage at 105℃ , capacitors meet the characteristics requirements listed at right. <table><tr><td>Capacitance Change</td><td>Within ±20% of initial value</td></tr><tr><td>Dissipation Factor</td><td>Less than 200% of specified value</td></tr><tr><td>Leakage Current</td><td>Initial specified value of less</td></tr></table>	Capacitance Change	Within ±20% of initial value	Dissipation Factor	Less than 200% of specified value	Leakage Current	Initial specified value of less															
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Shelf Life	After leaving capacitors under no load at 105℃ for 1000 hours and applying voltage they meet the specified value for load life characteristics listed above.																					
Marking	Printed with white color letter on black sleeve.																					
Applicable Standards	Satisfies characteristic W of JIS C5141.																					

DIARGAM OF DIMENSIONS

Unit: mm



LEAD DIAMETER

ΦD	5	6	6.3	8	10	13	16	18	22	25
Φ	0.6						0.8			
α	1.5				2.0					
β	0.5				1.0					

Suntan

AXIAL TYPE ALUMINUM ELECTROLYTIC CAPACITORS

H I G H V O L T A G E T Y P E

TS13AQ

DIMENSIONS: Diameter (DΦ)x Length(L) m/m

RIPPLE CURRENT. mA at 105℃, 120Hz

V.DC		160v (2C)		200V (2D)		250V (2E)		350V (2V)		400V (2G)		450V (2W)	
μF	Contents	ΦDxL	mA	ΦDxL	MA	ΦDxL	mA	ΦDxL	mA	ΦDxL	mA	ΦDxL	mA
1.0	010	6x12	7	6x12	9	6.3x14	12	8x16	13	8x16	15	8x16	15
2.2	2R2	6.3x14	15	8x13	16	8x16	17	8x20	19	10x17	23	10x21	23
3.3	3R3	8x13	21	8x16	26	8x20	31	8x20	33	10x17	36	10x21	36
4.7	4R7	8x16	31	10x17	33	10x17	38	10x21	44	10x26	46	10x26	46
10	100	10x17	60	10x21	66	10x21	69	13x22	72	13x22	79	13x27	81
22	220	10x21	121	13x22	121	13x27	117	13x27	121	16x33	121	16x36	130
33	330	13x22	150	13x27	166	16x28	148	16x33	159	16x36	159	16x40	168
47	470	13x27	197	16x33	214	16x33	190	16x40	200	18x42	200	18x42	204
100	101	16x33	320	16x36	343	16x40	355	22x43	315	25x43	339	25x52	346
220	221	18x42	539	22x43	539	22x43	514						
330	331	22x43											

*Frequency coefficient of allowable ripple current

*Allowable ripple current vs. ambient temperature

Freq.(Hz) Cap.(μF)	60	120	500	1K	10K up
Under 100	0.70	1.00	1.30	1.40	1.50
100 to 330	0.75	1.00	1.20	1.30	1.35

Temperature (℃)	Under 50	70	85	105
Multiplied	1.95	1.78	1.40	1.00