

Type ST, 55 °C Strobe-Flash, Long-Life, 360 & 450 V, Aluminum

Type ST Strobe-Flash Capacitors



High Energy, Long-Life

Rugged Type ST capacitors can withstand more than 30 million full discharges in typical strobe-lamp applications—that's more than ten years' operation in emergency vehicles. This exceptional life capability is also available in screw-terminal and other case styles and other capacitance values.

The ST's magic is its ability to handle the spectrum of currents caused by full discharge at 1 Hz and faster rates. Because discharge energy is at frequencies from less than a hertz to thousands of hertz, power loss and heating are not predicted by the ESR at 120 Hz, and the open-structure anode foil of Type ST excels at low loss over the full spectrum.

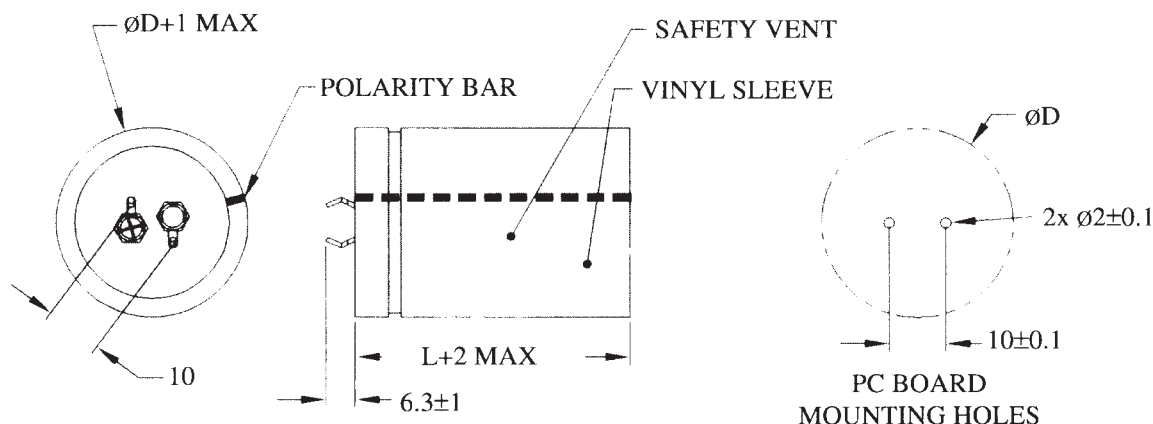
Highlights

- w Tested to More than 10 Million Flashes
- w More than 30 Million Flashes Typical Life
- w Snapmount or Solder-Lug Terminals

Specifications

Operating Temperature:	-40 °C to +55 °C
Rated Voltage:	360 or 450 Vdc
Capacitance:	30 to 300 µF -10% +20%
Leakage Current:	0.01 CV +20 µA at 25 °C
Cold Impedance:	-20 °C multiplier of 25 °C $Z \leq 2$
Dissipation Factor:	7% maximum @ 25 °C & 120 Hz
Discharge Life:	10 million discharges at 1 s interval, xenon flash tube 0.7 to 1Ω Δ capacitance ±10%, ESR 150% of limit, DCL 150% of limit
Shelf Life:	500 h @ +55 °C, Δ capacitance ±10% ESR 150% of limit, DCL 150% of limit
Vibration:	10 to 55 Hz; 0.06" and 10 g max, 6 h vertical, 2 h each, 2 other planes

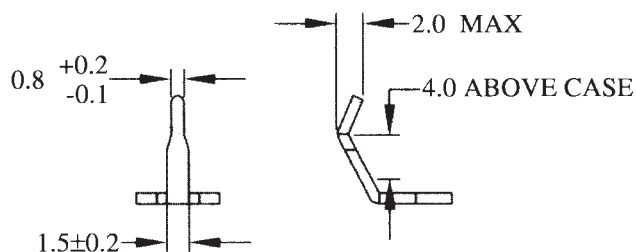
Outline Drawings



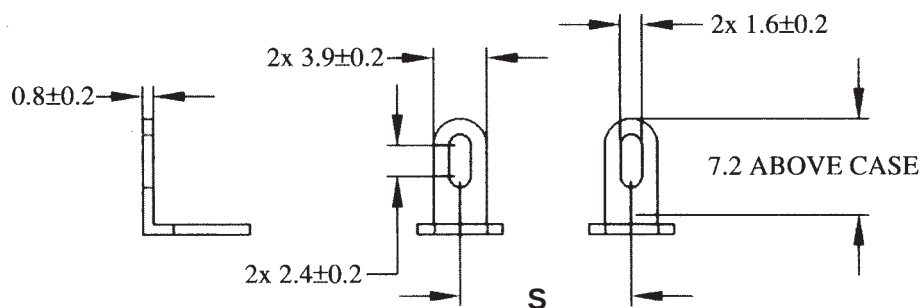
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Terminal Drawings

Snap-In Terminals



Solder-Lug Terminals



Case Dimensions

Case Code	Diam. (D) Max.		Length (L) Max.		Terminal Spacing (S)		Typical Weight
	mm	Inches	mm	Inches	mm	Inches	
H04	22	0.87	40	1.57	8.5	0.33	24
J01	25	0.98	25	0.98	10.0	0.39	20
J02	25	0.98	30	1.18	10.0	0.39	24
J03	25	0.98	35	1.38	10.0	0.39	27
J04	25	0.98	40	1.57	10.0	0.39	31
J05	25	0.98	50	1.97	10.0	0.39	38
K03	30	1.18	35	1.38	12.7	0.50	40
K04	30	1.18	40	1.57	12.7	0.50	44
K05	30	1.18	50	1.97	12.7	0.50	53
A05	35	1.38	50	1.97	12.7	0.50	67
A06	35	1.38	63	2.48	12.7	0.50	88

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Capacitors

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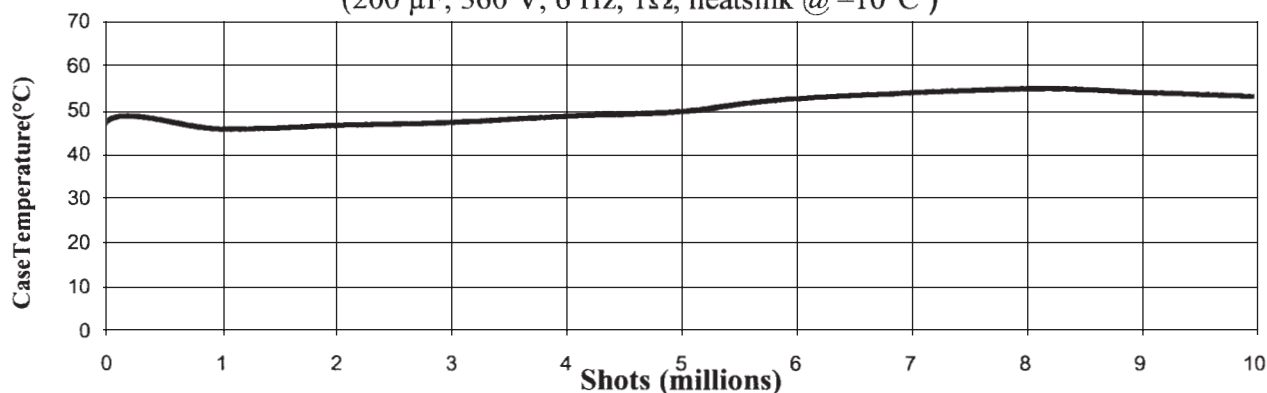
Part Numbering System

ST	121	V	360	J05	2	L
Type	Capacitance	Tolerance	Rated Voltage	Case Code	Insulation	Terminals
	300 = 30 μ F 121 = 120 μ F	-10 + 20%			2 = PVC	blank = snap-in L = solder lugs

Typical Performance Curves

Strobe Discharge Life Test

(200 μ F, 360 V, 6 Hz, 1 Ω , heatsink @ -10°C)



Ratings

Cap. μ F	Catalog Number	ESR Max. Ω +25°C 120 Hz	Diameter		Length	
			mm	in	mm	in
360 Vdc (390 Vdc Surge)						
48	ST480V360J012	1.92	25	0.98	25	0.98
60	ST600V360J022	1.54	25	0.98	30	1.18
80	ST800V360J032	1.15	25	0.98	35	1.38
100	ST101V360J042	0.92	25	0.98	40	1.57
120	ST121V360K032	0.77	30	1.18	35	1.38
150	ST151V360J052	0.61	25	0.98	50	1.97
200	ST201V360K052	0.46	30	1.18	50	1.97
250	ST251V360A052	0.37	35	1.38	50	1.97
300	ST301V360A062	0.31	35	1.38	63	2.48
450 Vdc (500 Vdc Surge)						
30	ST300V450J012	3.07	25	0.98	25	0.98
40	ST400V450H042	2.30	22	0.87	40	1.57
50	ST500V450J032	1.84	25	0.98	35	1.38
60	ST600V450J042	1.54	25	0.98	40	1.57
80	ST800V450J052	1.15	25	0.98	50	1.97
100	ST101V450K042	1.08	30	1.18	40	1.57
120	ST121V450K052	0.77	30	1.18	50	1.97
150	ST151V450A052	0.61	35	1.38	50	1.97

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