

Radial Lead Stacked Film Capacitors



For all general purpose film capacitor applications

FEATURES

- Small Size
- Self Healing
- Capacitance Range 0.01 μF to 2.2 μF
- Voltage Range 50WVDC to 100WVDC

SPECIFICATIONS

Capacitance Tolerance		$\pm 5\%$ at 1kHz, 25°C				
Operating Temperature Range		-40°C to 105°C				
Voltage Range	WVDC	50	63	100		
	VAC	40	40	63		
Dissipation Factor		1.0% at 1 kHz, 25°C				
Insulation Resistance		Capacitance	Insulation Resistance			
		$\leq 0.33 \mu\text{F}$	3,000 M Ω			
Load Life		$> 0.33 \mu\text{F}$	1,000 M Ω x μF			
		2,000 hours, +85°C with 125% rated DC voltage				
		Capacitance Change	$\leq 7\%$ maximum			
		Dissipation Factor Change	$< 110\%$ maximum specification			
Humidity Test		Insulation Resistance	$\geq 50\%$ of minimum initial limits			
		250 hours, 95% RH, 25°C and no applied voltage				
		Capacitance Change	$< 7\%$ of initial readings @ +25°C, 1kHz			
Self-inductance		Dissipation Factor Change	$\leq 110\%$ of initial +25°C 1kHz			
		Insulation Resistance	$\geq 50\%$ of minimum initial limit			
Self-inductance		≤ 1 nH/mm along the capacitor pitch				
Capacitance Drift Factor		(after 2 years) $\leq 1.0\%$ up to 40°C				
Capacitance Temperature Coefficient		+400 ppm/°C, ± 200 ppm/°C				

PERFORMANCE RATINGS/TESTS

RATED WVDC TEMPERATURE DERATING

Operating Temperature	WVDC Rating
+25°C	100%
+85°C	100%
+105°C	50%

RATED AC VOLTAGE (VAC)

The AC working voltage must be derated when used at frequencies other than 60Hz due to dielectric effects.

NOTE: The peak value of the AC voltage superimposed upon the DC voltage should not exceed the rated DC voltage.

DIELECTRIC STRENGTH

150% Rated DC for 1 minute at +25°C.

INSULATION RESISTANCE (IR)

@+25°C (< 70%RH) for 1 minute

Capacitance	Insulation Resistance
$\leq 0.33 \mu\text{F}$	$\geq 3,000 \text{ M}\Omega$
$> 0.33 \mu\text{F}$	$\geq 1,000 \text{ M}\Omega$ x μF

Rated WVDC	Test Voltage
≤ 100	50WVDC

RELIABILITY

Failure Rate: 829 ppm/1000 hrs.
MTTF: 1.2×10^9 hours

CONSTRUCTION

Type:	Stacked film
Dielectric:	Polyester film and polyarylate film
Electrodes:	Vacuum deposited aluminum layers
Leads:	Tinned copper wire (minimum lead content 5%)
Coating:	Epoxy sealed resin



Extended metallized film design

STR

Radial Lead
Stacked Film
Capacitors

STANDARD PART LISTING

Capacitance μF	WVDC	IC PART NUMBER	dv/dt (v/ μs)
0.01	50	103STR050J	37
0.01	100	103STR100J	55
0.015	50	153STR050J	37
0.015	100	153STR100J	55
0.022	50	223STR050J	37
0.022	100	223STR100J	55
0.033	50	333STR050J	37
0.033	100	333STR100J	55
0.047	50	473STR050J	37
0.047	100	473STR100J	55
0.068	50	683STR050J	37
0.068	63	683STR063J	49

Capacitance μF	WVDC	IC PART NUMBER	dv/dt (v/ μs)
0.068	100	683STR100J	55
0.10	50	104STR050J	32
0.10	63	104STR063J	49
0.10	100	104STR100J	55
0.15	50	154STR050J	32
0.15	63	154STR063J	49
0.15	100	154STR100J	43
0.22	50	224STR050J	32
0.22	63	224STR063J	45
0.22	100	224STR100J	43
0.33	50	334STR050J	32

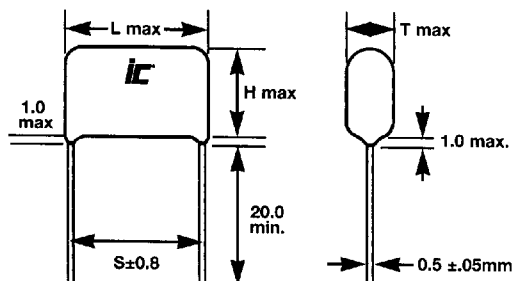
Capacitance μF	WVDC	IC PART NUMBER	dv/dt (v/ μs)
0.33	63	334STR063J	45
0.33	100	334STR100J	43
0.47	50	474STR050J	32
0.47	63	474STR063J	45
0.40	100	474STR100J	43
0.68	50	684STR050J	32
0.68	63	684STR063J	45
1.0	50	105STR050J	32
1.0	63	105STR100J	33
1.5	50	155STR050J	12
2.2	50	225STR050J	12

PHYSICAL DIMENSIONS

WVDC (VAC) μF	50 (40)	63 (40)	100 (63)
0.01	7.5x5x3.5		7.5x7x3.5
0.015	7.5x5x3.5		7.5x7x3.5
0.022	7.5x5x3.5		7.5x7x3.5
0.033	7.5x5x3.5		7.5x7x3.5
0.047	7.5x5x3.5		7.5x7x3.5
0.068	7.5x5x3.5		7.5x7x4
0.10	7.5x5x4	7.5x7x3.5	7.5x7x4.5
0.15	7.5x5.5x4.5	7.5x7x4.5	10.5x9x3.5
0.22	7.5x5.5x5	10.5x9x3.5	10.5x9x4
0.33	7.5x7x5.5	10.5x9x4	10.5x10x5
0.47	7.5x7.5x6	10.5x9x4.5	10.5x10.5x7
0.68	7.5x10x6.5	10.5x10x5.5	
1.0	7.5x11x8	10.5x10x7	
1.5	10.5x10x7.5		
2.2	10.5x12x8		

Convert to inches divide by 25.4

LxHxT(mm)



LEAD SPACING	
L	S
<10	5.0
≥10	7.5

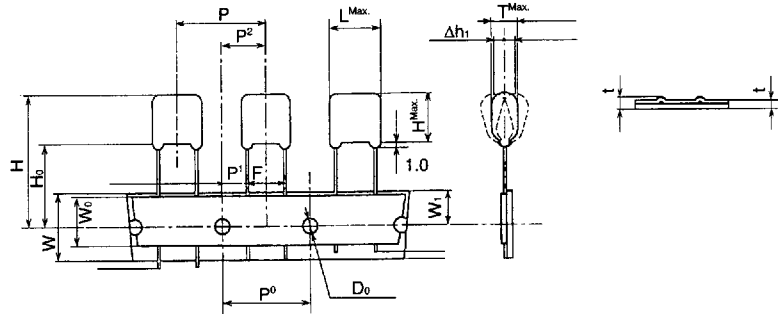
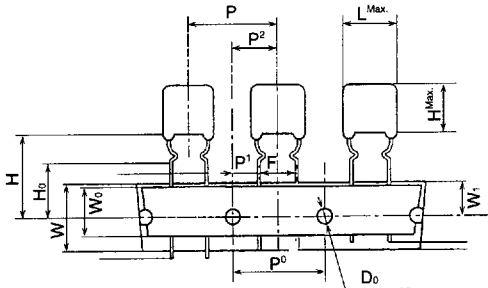
ic ILLINOIS CAPACITOR, INC. 3757 W. Touhy Ave., Lincolnwood, Illinois 60645 • (847) 675-1760 • Fax (847) 673-2850

STR Special Order Options

TAPE/AMMO BOX STYLE

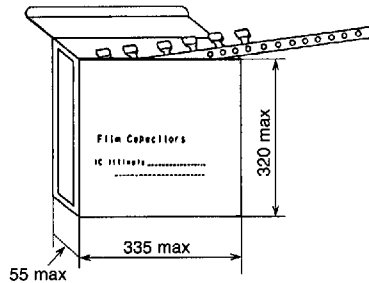
Suffix: SA

Suffix: SL



TAPING			
SPECIFICATIONS	SA	SL	TOL. (mm)
Lead Spacing (S)	5.0		+0.8/0.2
Capacitor pitch (P)	12.7		±0.1
Feed Hole Pitch (P ⁰)	12.7		±0.2
Feed Hole to First Lead (P ₂)	6.35		±1.3
Carrier Width (W)	18.0		±0.5
Feed Hole Position (W ₁)	9.0		±0.5
Height of Seating Plane (H)	20±0.75	18 ^{+2.0} _{-0.0}	-
Lead Wire Clinch Height (H ₀)	16.0	-	±0.5
Feed Hole Diameter (D ₀)	4.0		±0.2
Case Top to Feed Hole (H ₁)	-	32.2	Max.
Front to Back Inclination Δh	0.0		±2.0
Tape Thickness (t)	0.7		±0.2

PACKAGE QUANTITY		Type SA
WVDC	Capacitance Range	Quantity
50	0.01 0.15 to 2.5	2000 1000
63	0.01 to 0.33 0.47 to 1.0	2000 1000
100	0.01 to 0.068 0.10 0.15 to 0.22 0.33 to 0.47	2000 1000 2000 1000

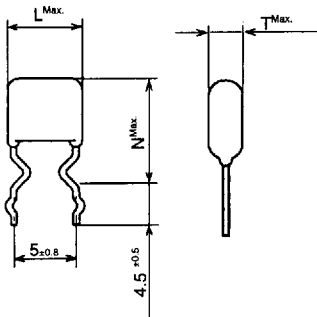


PACKAGE QUANTITY		Type SL
WVDC	Capacitance Range	Quantity
50	0.01 0.15 to 1.0	2000 1000
63	0.01 to 0.15	2000
100	0.1	1000

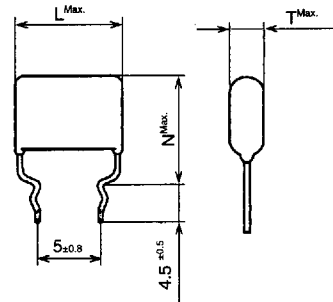
CUT AND FORMED LEADS

SUFFIX: S1
L ≤ 10.0 mm

Suffix: T1
L > 10.0 mm



WVDC	N Max. (mm)
50	H+4.0
63	H+4.0
100	H+5.0



WVDC	N Max. (mm)
50	H+4.5
63	H+5.0
100	H+5.0