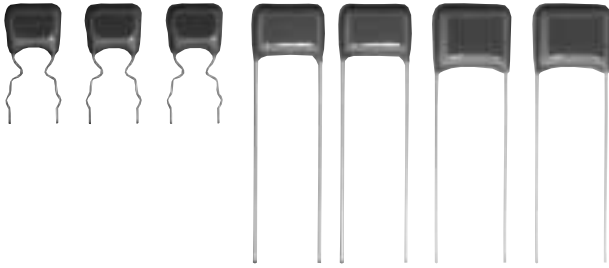


# Type DSF Polyester Capacitors

## Stacked Metallized Radial Leads



## Subminiature Size

Type DSF film capacitors are made with stacked metallized polyester, resulting in high volumetric efficiency and a very economical solution for general purpose DC applications. Ideally suited for blocking, by-pass, coupling, decoupling, and filtering circuits. Specifically designed for applications where high density insertion of components is required. Ammo box style or reel taping available.

## Specifications

**Voltage Range:** 50-100 Vdc (63 Vdc Optional)

**Capacitance Range:** .010-2.2  $\mu$ F

**Capacitance Tolerance:**  $\pm$  5% (J) standard

**Operating Temperature Range:** -40 to + 85°C

Full rated voltage at 85°C-Derate linearly to 50% - rated voltage at 125°C

**Dielectric Strength:** Rated Vdc x 150 %, 60 sec.

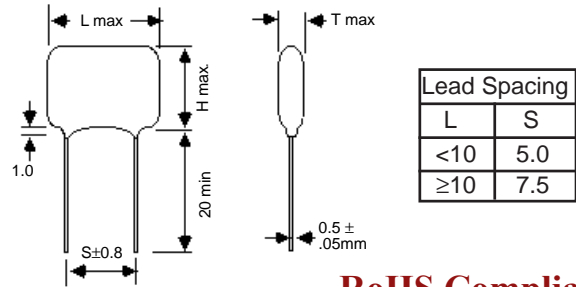
**Dissipation Factor:** 1% max (25°C, 1 kHz)

**Insulation Resistance:** C $\leq$ 0.33 $\mu$ F : 3000M $\Omega$  min.

C $>$ 0.33 $\mu$ F : 1000M $\Omega$ · $\mu$ F min.

**Life Test:** 1000 h @ 85 °C, 125% rated voltage

Pulse Capability		
Rated Volts	Body Length (mm)	
	7.3, 7.5	10.2
dV/dt volts per microsecond, max.		
50	32 - 37	12
100	55	43



## Ratings and Dimensions

## RoHS Compliant

Cap. ( $\mu$ F)	Catalog Part Number	T Inches(mm)	H Inches(mm)	L Inches(mm)	S Inches(mm)
<b>50 Vdc</b>					
0.010	DSF050J103	0.126 (3.2)	0.197 (5.0)	0.287 (7.3)	0.197 (5.0)
0.012	DSF050J123	0.126 (3.2)	0.197 (5.0)	0.287 (7.3)	0.197 (5.0)
0.015	DSF050J153	0.126 (3.2)	0.197 (5.0)	0.287 (7.3)	0.197 (5.0)
0.018	DSF050J183	0.126 (3.2)	0.197 (5.0)	0.287 (7.3)	0.197 (5.0)
0.022	DSF050J223	0.126 (3.2)	0.197 (5.0)	0.287 (7.3)	0.197 (5.0)
0.027	DSF050J273	0.126 (3.2)	0.197 (5.0)	0.287 (7.3)	0.197 (5.0)
0.033	DSF050J333	0.126 (3.2)	0.197 (5.0)	0.287 (7.3)	0.197 (5.0)
0.039	DSF050J393	0.126 (3.2)	0.197 (5.0)	0.287 (7.3)	0.197 (5.0)
0.047	DSF050J473	0.126 (3.2)	0.197 (5.0)	0.287 (7.3)	0.197 (5.0)
0.056	DSF050J563	0.126 (3.2)	0.197 (5.0)	0.287 (7.3)	0.197 (5.0)
0.068	DSF050J683	0.126 (3.2)	0.197 (5.0)	0.287 (7.3)	0.197 (5.0)
0.082	DSF050J823	0.142 (3.6)	0.197 (5.0)	0.287 (7.3)	0.197 (5.0)
0.100	DSF050J104	0.157 (4.0)	0.197 (5.0)	0.287 (7.3)	0.197 (5.0)
0.120	DSF050J124	0.157 (4.0)	0.197 (5.0)	0.287 (7.3)	0.197 (5.0)
0.150	DSF050J154	0.173 (4.4)	0.217 (5.5)	0.287 (7.3)	0.197 (5.0)
0.180	DSF050J184	0.177 (4.5)	0.217 (5.5)	0.287 (7.3)	0.197 (5.0)
0.220	DSF050J224	0.189 (4.8)	0.217 (5.5)	0.287 (7.3)	0.197 (5.0)
0.270	DSF050J274	0.181 (4.6)	0.276 (7.0)	0.287 (7.3)	0.197 (5.0)
0.330	DSF050J334	0.205 (5.2)	0.276 (7.0)	0.287 (7.3)	0.197 (5.0)
0.390	DSF050J394	0.224 (5.7)	0.287 (7.3)	0.287 (7.3)	0.197 (5.0)
0.470	DSF050J474	0.236 (6.0)	0.287 (7.3)	0.287 (7.3)	0.197 (5.0)
0.560	DSF050J564	0.228 (5.8)	0.394 (10.0)	0.287 (7.3)	0.197 (5.0)
0.680	DSF050J684	0.256 (6.5)	0.394 (10.0)	0.287 (7.3)	0.197 (5.0)
0.820	DSF050J824	0.268 (6.8)	0.394 (10.0)	0.287 (7.3)	0.197 (5.0)
1.000	DSF050J105	0.315 (8.0)	0.433 (11.0)	0.287 (7.3)	0.197 (5.0)

Cap. ( $\mu$ F)	Catalog Part Number	T Inches(mm)	H In. (mm)	L Inches(mm)	S Inches(mm)
<b>100 Vdc</b>					
1.200	DSF050J125	0.256 (6.5)	0.394 (10.0)	0.402 (10.2)	0.295 (7.5)
1.500	DSF050J155	0.283 (7.2)	0.394 (10.0)	0.402 (10.2)	0.295 (7.5)
1.800	DSF050J185	0.283 (7.2)	0.472 (12.0)	0.402 (10.2)	0.295 (7.5)
2.200	DSF050J225	0.311 (7.9)	0.472 (12.0)	0.402 (10.2)	0.295 (7.5)
0.010	DSF100J103	0.126 (3.2)	0.276 (7.0)	0.295 (7.5)	0.197 (5.0)
0.012	DSF100J123	0.126 (3.2)	0.276 (7.0)	0.295 (7.5)	0.197 (5.0)
0.015	DSF100J153	0.126 (3.2)	0.276 (7.0)	0.295 (7.5)	0.197 (5.0)
0.018	DSF100J183	0.126 (3.2)	0.276 (7.0)	0.295 (7.5)	0.197 (5.0)
0.022	DSF100J223	0.126 (3.2)	0.276 (7.0)	0.295 (7.5)	0.197 (5.0)
0.027	DSF100J273	0.126 (3.2)	0.276 (7.0)	0.295 (7.5)	0.197 (5.0)
0.033	DSF100J333	0.126 (3.2)	0.276 (7.0)	0.295 (7.5)	0.197 (5.0)
0.039	DSF100J393	0.126 (3.2)	0.276 (7.0)	0.295 (7.5)	0.197 (5.0)
0.047	DSF100J473	0.126 (3.2)	0.276 (7.0)	0.295 (7.5)	0.197 (5.0)
0.056	DSF100J563	0.126 (3.2)	0.276 (7.0)	0.295 (7.5)	0.197 (5.0)
0.068	DSF100J683	0.157 (4.0)	0.276 (7.0)	0.295 (7.5)	0.197 (5.0)
0.082	DSF100J823	0.161 (4.1)	0.276 (7.0)	0.295 (7.5)	0.197 (5.0)
0.100	DSF100J104	0.177 (4.5)	0.276 (7.0)	0.295 (7.5)	0.197 (5.0)
0.120	DSF100J124	0.130 (3.3)	0.354 (9.0)	0.402 (10.2)	0.295 (7.5)
0.150	DSF100J154	0.130 (3.3)	0.354 (9.0)	0.402 (10.2)	0.295 (7.5)
0.180	DSF100J184	0.142 (3.6)	0.354 (9.0)	0.402 (10.2)	0.295 (7.5)
0.220	DSF100J224	0.157 (4.0)	0.354 (9.0)	0.402 (10.2)	0.295 (7.5)
0.270	DSF100J274	0.165 (4.2)	0.354 (9.0)	0.402 (10.2)	0.295 (7.5)
0.330	DSF100J334	0.189 (4.8)	0.394 (10.0)	0.402 (10.2)	0.295 (7.5)
0.390	DSF100J394	0.217 (5.5)	0.394 (10.0)	0.402 (10.2)	0.295 (7.5)
0.470	DSF100J474	0.268 (6.8)	0.413 (10.5)	0.402 (10.2)	0.295 (7.5)

# Type DSF Polyester Capacitors

**DSF**  
Dipped  
Stacked  
Film  
Type

**050**  
Voltage  
Code  
050 = 50 Vdc  
100 = 100 Vdc

**J**  
Capacitance  
Tolerance  
J = ±5%

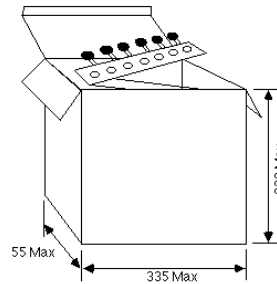
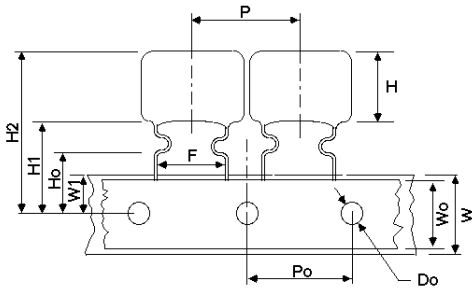
**223**  
Nominal  
Capacitance  
(First two digits are significant  
figures. Last digit is multiplier  
to give cap in pF)  
e.g. 223 = 22 X 10<sup>3</sup> pF = .022 μF  
104 = 10 X 10<sup>4</sup> pF = .100 μF  
155 = 15 X 10<sup>5</sup> pF = 1.50 μF

**C**  
Bulk and Ammo  
Packaging Options  
Blank = Straight lead, Bulk  
C = Crimped, Bulk  
CA = Crimped Lead, Ammo Pack  
TA = Straight Lead, Ammo Pack

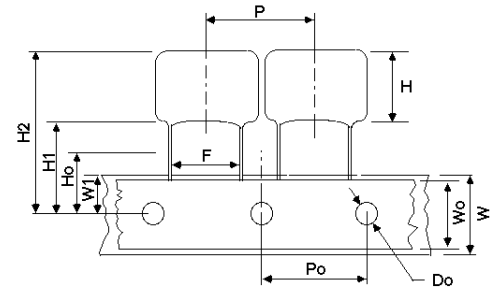
*Tape & Reel packaging available.  
Contact us for detailed specs.*

## Ammo Pack Options

### Crimped Lead Ammo Pack Option (CA)



### Straight Lead Ammo Pack Option (TA)



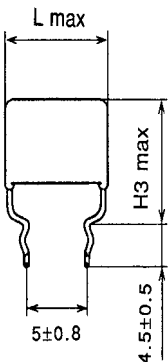
PACKAGE QUANTITY FOR AMMO PACK CRIMPED LEAD OPTION (CA) & (CR)		
WVDC	Capacitance Range	Quantity
50	0.01 - 0.12	2000
	0.15 - 2.2	1000
100	0.01 - 0.068	2000
	0.082 - 0.1	1000
	0.12 - 0.22	2000
	0.27 - 0.47	1000

PACKAGE QUANTITY FOR AMMO PACK STRAIGHT LEAD OPTION (TA) & (TR)		
WVDC	Capacitance Range	Quantity
50	0.01 - 0.12	2000
	0.15 to 1.0	1000
100	0.01 - 0.068	2000
	0.082 - 0.1	1000

## Bulk Cut & Crimp Styles

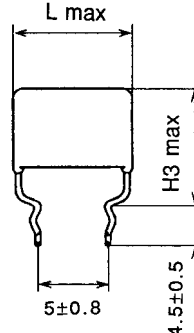
*Crimp style depends on capacitor length.*

$L \leq 10.0$  mm



WVDC	H3 max. (mm)
50	H+4.5
100	H+5.0

$L > 10.0$  mm



AMMO PACK TAPING SPECIFICATIONS			
	Dimensions for Crimped Option (CA)	Dimensions for Straight Lead Option (TA)	Tol. (mm)
Lead Spacing (F)	5.0	5.0	+8/-2
Capacitor Pitch (P)	12.7	12.7	±1
Feed Hole Pitch (Po)	12.7	12.7	±2
Carrier Width (W)	18.0	18.0	±5
Feed Hole Position (W1)	9.0	9.0	±5
Height of Seating Plane (H1)	20.0	20.0	±5
Lead Wire Clinch Height (H0)	16.0	---	±5
Feed Hole Diameter (Do)	4.0	4.0	±2
Case Top to Feed Hole (H2) Max.	20.5 + Hmax	20.5 + Hmax	Max.

**Notice and Disclaimer:** All product drawings, descriptions, specifications, statements, information and data (collectively, the "Information") in this datasheet or other publication are subject to change. The customer is responsible for checking, confirming and verifying the extent to which the Information contained in this datasheet or other publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without any guarantee, warranty, representation or responsibility of any kind, expressed or implied. Statements of suitability for certain applications are based on the knowledge that the Cornell Dubilier company providing such statements ("Cornell Dubilier") has of operating conditions that such Cornell Dubilier company regards as typical for such applications, but are not intended to constitute any guarantee, warranty or representation regarding any such matter – and Cornell Dubilier specifically and expressly disclaims any guarantee, warranty or representation concerning the suitability for a specific customer application, use, storage, transportation, or operating environment. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by Cornell Dubilier with reference to the use of any Cornell Dubilier products is given gratis (unless otherwise specified by Cornell Dubilier), and Cornell Dubilier assumes no obligation or liability for the advice given or results obtained. Although Cornell Dubilier strives to apply the most stringent quality and safety standards regarding the design and manufacturing of its products, in light of the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies or other appropriate protective measures) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage. Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated in such warnings, cautions and notes, or that other safety measures may not be required.