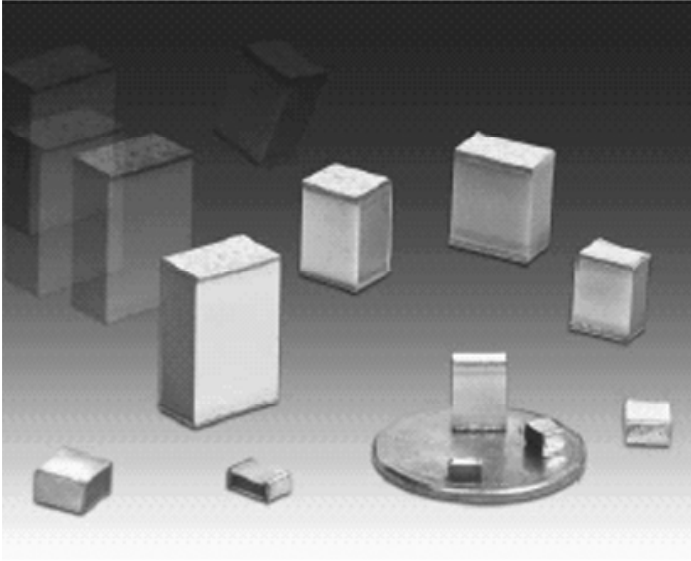


Type FCN Surface Mount Film Capacitors

Stable Stacked Metallized Film (PEN) Chips for Reflow Soldering



Type FCN SMT capacitors are the general purpose line of CDE's surface mount product offerings. They range in capacitance from .001 μF to 1.0 μF , and they are available in voltage ratings up to 400 Vdc.

Type FCN capacitors are designed for applications requiring a general purpose SMT capacitor with stable temperature and frequency characteristics similar to polyester film capacitors. They are ideal for applications such as EMI noise filtering, power supply input/output filters, audio or signal coupling, and IC power bus bypassing or decoupling. FCN SMT capacitors have a non-inductive stacked metallized PEN film construction which results in a low ESR and excellent high frequency performance.

Highlights

- Designed for reflow soldering
- Withstands 150% of rated voltage for 60 seconds
- Stacked metallized polyethylene naphthalate (PEN) film
- Performs like polyester capacitors
- Nonmagnetic and lead-free

Specifications

| | |
|--|---|
| Capacitance Range: | 1000 pF to 1.0 μF (1 kHz at 5 Vrms) |
| Capacitance Tolerance: | $\pm 5\%$ (J), $\pm 10\%$ (K) (See Ratings) |
| Voltages: | 16, 50, 100, 250 & 400 Vdc |
| Operating Temperature Range: | 16, 50, 100Vdc (<0.012 μF); -55 $^{\circ}\text{C}$ to +105 $^{\circ}\text{C}$ 100 Vdc ($\geq 0.012 \mu\text{F}$), 250, 400 Vdc; -40 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$ |
| IR (at 20 $^{\circ}\text{C}$, after 60 seconds): | C >0.33 μF : IR = 1000 $\text{M}\Omega \cdot \mu\text{F}$ Min. C $\leq 0.33 \mu\text{F}$: IR $\geq 3000 \text{M}\Omega$ |
| Dissipation Factor (Tanδ): | 1.0% Max. (1 kHz at 5 Vrms) |
| Life Test: | 1000 h at rated temp. & 125% rated voltage Δ Capacitance: +1%, -6% max Dissipation Factor: 1.1% max IR: 1000 $\text{M}\Omega\text{min}$ (C>0.33 μF , 300 $\text{M}\Omega \cdot \mu\text{F}$ min) No significant visual damage |
| Moisture Resistance: | 1000 h at 40 $^{\circ}\text{C}$ and 90 - 95% RH & rated voltage Δ Capacitance: +8/-5% Dissipation Factor: 1.5% max IR: 100 $\text{M}\Omega$ min (C >0.33 μF , 30 $\text{M}\Omega \cdot \mu\text{F}$ min) Voltage withstanding: 1.3 times rated voltage, 1 min. No significant damage |



Complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), PolyBrominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

Type FCN Surface Mount Film Capacitors

Specifications

Moisture Resistance:

500 h at 85 °C and 85% RH
 Δ Capacitance: $\pm 10\%$ max
 Dissipation Factor: 2% max
 IR: 10 M Ω min (C > 0.33 μ F, 3 M $\Omega \cdot \mu$ F min)
 Voltage withstanding: 1.3 times rated voltage, 1 min.
 No significant damage

Resistance to Soldering Heat:

5 s at max capacitor surface temperature
 Δ Capacitance: $\pm 5\%$ max
 Dissipation Factor: 1.1% max
 IR: 1000 M Ω min (C > 0.33 μ F, 300 M $\Omega \cdot \mu$ F min)
 Voltage withstanding: 1.5 times rated voltage, 1 min.
 No significant visual damage.

Withstand Voltage:

16 V & 50 V, 100 V \leq 0.01 μ F: 175% rated voltage, 5 s
 100 V \geq 0.012 μ F, 250 V and 400 V: 150% rated voltage, 5 s

Surface Temperature:

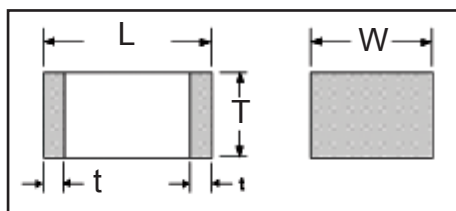
16 V & 50 V & 100 V \leq 0.01 μ F: 240 °C max
 100 V \geq 0.012 μ F, 250 V & 400 V: 230 °C max

Part Numbering System

| FCN | 1206 | A | 102 | J | H2 | Packaging | Tape Width (mm) | Tape Diameter [in.(mm)] | Reel Quantity |
|------|-----------|-------------|---------------------|----------------|------------|-----------|-----------------|-------------------------|---------------|
| Type | Case Size | Voltage | Capacitance | Tolerance | Code | | | | |
| FCN | 1206 | C = 16 Vdc | 102 = 0.001 μ F | J = $\pm 5\%$ | K1 | = | 8 | 7 (178) | 4000 |
| | 1913 | H = 50 Vdc | 223 = 0.022 μ F | K = $\pm 10\%$ | J1, J2 | = | 8 | 7 (178) | 3000 |
| | 2416 | A = 100 Vdc | 474 = 0.47 μ F | | H1, H2 | = | 8 | 7 (178) | 3000 |
| | 2420 | E = 250 Vdc | | | H3 | = | 8 | 7 (178) | 2000 |
| | 2820 | G = 400 Vdc | | | G1, G2, G3 | = | 8 | 7 (178) | 2000 |
| | 3022 | | | | E1, E2 | = | 12 | 13 (330) | 3000 |
| | 3925 | | | | E3, E4 | = | 12 | 13 (330) | 2000 |
| | 3931 | | | | D1, D2 | = | 12 | 13 (330) | 3000 |
| | 6031 | | | | D3, D4, D5 | = | 12 | 13 (330) | 2000 |
| | 6040 | | | | B, Z | = | 12 | 13 (330) | 1500 |
| | | | | | U, V, X, Y | = | 16 | 13 (330) | 1000 |
| | | | | | S, T | = | 24 | 13 (330) | 750 |

Type FCN Surface Mount Film Capacitors

Outline Drawing



$t = 0.014 \pm 0.008$ in. (0.35 ± 0.2 mm)

For $0.001 \mu\text{F} - 0.01 \mu\text{F}$, 100 V, $t = 0.026 \pm 0.012$ in. (0.62 ± 0.3 mm)

Ratings

| Cap (μF) | Catalog Part Number | L in (mm) | W in (mm) | T in (mm) |
|--------------------------|------------------------|-----------------------|-----------------------|-----------------------|
| 16 Vdc | | | | |
| .12 | FCN1913C124J-E1 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .15 | FCN1913C154J-E2 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.079±0.008 (2.0±0.2) |
| .18 | FCN1913C184J-E2 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.079±0.008 (2.0±0.2) |
| .22 | FCN1913C224J-E4 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.094±0.008 (2.4±0.2) |
| .27 | FCN2416C274J-D1 | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.071±0.008 (1.8±0.2) |
| .33 | FCN2416C334J-D2 | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.079±0.008 (2.0±0.2) |
| .39 | FCN2416C394J-D3 | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.094±0.008 (2.4±0.2) |
| .47 | FCN2416C474J-D4 | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.110±0.008 (2.8±0.2) |
| 50 Vdc | | | | |
| .056 | FCN1913H563J-E2 | 0.189±0.008 (4.8±0.3) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .068 | FCN1913H683J-E2 | 0.189±0.008 (4.8±0.3) | 0.130±0.012 (3.3±0.3) | 0.079±0.008 (2.0±0.2) |
| .082 | FCN1913H823J-E4 | 0.189±0.008 (4.8±0.3) | 0.130±0.012 (3.3±0.3) | 0.079±0.008 (2.0±0.2) |
| .10 | FCN1913H104J-E3 | 0.189±0.008 (4.8±0.3) | 0.130±0.012 (3.3±0.3) | 0.094±0.008 (2.4±0.2) |
| .12 | FCN2416H124J-D1 | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.071±0.008 (1.8±0.2) |
| .15 | FCN2416H154J-D2 | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.079±0.008 (2.0±0.2) |
| .18 | FCN2416H184J-D3 | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.094±0.008 (2.4±0.2) |
| .22 | FCN2416H224J-D4 | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.110±0.008 (2.8±0.2) |
| 100 Vdc | | | | |
| .0010 | FCN1206A102J-H2 | 0.126±0.008 (3.2±0.2) | 0.063±0.012 (1.6±0.3) | 0.043±0.008 (1.1±0.2) |
| .0012 | FCN1206A122J-H2 | 0.126±0.008 (3.2±0.2) | 0.063±0.012 (1.6±0.3) | 0.043±0.008 (1.1±0.2) |
| .0015 | FCN1206A152J-H2 | 0.126±0.008 (3.2±0.2) | 0.063±0.012 (1.6±0.3) | 0.043±0.008 (1.1±0.2) |
| .0018 | FCN1206A182J-H2 | 0.126±0.008 (3.2±0.2) | 0.063±0.012 (1.6±0.3) | 0.043±0.008 (1.1±0.2) |
| .0022 | FCN1206A222J-H2 | 0.126±0.008 (3.2±0.2) | 0.063±0.012 (1.6±0.3) | 0.043±0.008 (1.1±0.2) |
| .0027 | FCN1206A272J-H2 | 0.126±0.008 (3.2±0.2) | 0.063±0.012 (1.6±0.3) | 0.043±0.008 (1.1±0.2) |
| .0033 | FCN1206A332J-H3 | 0.126±0.008 (3.2±0.2) | 0.063±0.012 (1.6±0.3) | 0.059±0.008 (1.5±0.2) |
| .0039 | FCN1206A392J-H3 | 0.126±0.008 (3.2±0.2) | 0.063±0.012 (1.6±0.3) | 0.059±0.008 (1.5±0.2) |
| .0047 | FCN1206A472J-H3 | 0.126±0.008 (3.2±0.2) | 0.063±0.012 (1.6±0.3) | 0.059±0.008 (1.5±0.2) |
| .0056 | FCN1210A562J-G2 | 0.126±0.008 (3.2±0.2) | 0.063±0.012 (1.6±0.3) | 0.059±0.008 (1.5±0.2) |
| .0068 | FCN1210A682J-G2 | 0.126±0.008 (3.2±0.2) | 0.063±0.012 (1.6±0.3) | 0.059±0.008 (1.5±0.2) |
| .0082 | FCN1210A822J-G3 | 0.126±0.008 (3.2±0.2) | 0.063±0.012 (1.6±0.3) | 0.083±0.008 (2.1±0.2) |
| .010 | FCN1210A103J-G3 | 0.126±0.008 (3.2±0.2) | 0.063±0.012 (1.6±0.3) | 0.083±0.008 (2.1±0.2) |
| .012 | FCN1913A123K-E1 | 0.189±0.008 (4.8±0.2) | 0.189±0.008 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .015 | FCN1913A153K-E1 | 0.189±0.008 (4.8±0.2) | 0.189±0.008 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .018 | FCN1913A183K-E1 | 0.189±0.008 (4.8±0.2) | 0.189±0.008 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .022 | FCN1913A223K-E1 | 0.189±0.008 (4.8±0.2) | 0.189±0.008 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .027 | FCN1913A273K-E1 | 0.189±0.008 (4.8±0.2) | 0.189±0.008 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .033 | FCN1913A333K-E1 | 0.189±0.008 (4.8±0.2) | 0.189±0.008 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .039 | FCN1913A393K-E1 | 0.189±0.008 (4.8±0.2) | 0.189±0.008 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |

Type FCN Surface Mount Film Capacitors

| Cap (μ F) | Catalog Part Number | L in (mm) | W in (mm) | T in (mm) |
|-------------------|------------------------|-----------------------|-----------------------|-----------------------|
| 100 Vdc | | | | |
| .047 | FCN1913A473K-E2 | 0.189±0.008 (4.8±0.2) | 0.189±0.008 (3.3±0.3) | 0.079±0.008 (2.0±0.2) |
| .056 | FCN1913A563K-E2 | 0.189±0.008 (4.8±0.2) | 0.189±0.008 (3.3±0.3) | 0.079±0.008 (2.0±0.2) |
| .068 | FCN1913A683K-E4 | 0.189±0.008 (4.8±0.2) | 0.189±0.008 (3.3±0.3) | 0.094±0.008 (2.4±0.2) |
| .082 | FCN1913A823K-E3 | 0.189±0.008 (4.8±0.2) | 0.189±0.008 (3.3±0.3) | 0.110±0.012 (2.8±0.3) |
| .10 | FCN2416A104K-D1 | 0.189±0.008 (4.8±0.2) | 0.236±0.008 (6.0±0.2) | 0.071±0.012 (1.8±0.3) |
| .12 | FCN2416A124K-D3* | 0.189±0.008 (4.8±0.2) | 0.236±0.008 (6.0±0.2) | 0.099±0.012 (2.4±0.3) |
| .15 | FCN2416A154K-D4* | 0.189±0.008 (4.8±0.2) | 0.236±0.008 (6.0±0.2) | 0.110±0.012 (2.8±0.3) |
| .18 | FCN2820A184K-Z | 0.280±0.016 (7.1±0.4) | 0.197±0.016 (5.0±0.4) | 0.079±0.012 (2.0±0.3) |
| .22 | FCN2820A224K-Z | 0.280±0.016 (7.1±0.4) | 0.197±0.016 (5.0±0.4) | 0.094±0.012 (2.4±0.3) |
| .27 | FCN2820A274K-Z | 0.280±0.016 (7.1±0.4) | 0.197±0.016 (5.0±0.4) | 0.114±0.012 (2.9±0.3) |
| .33 | FCN2820A334K-Z | 0.280±0.016 (7.1±0.4) | 0.197±0.016 (5.0±0.4) | 0.138±0.012 (3.5±0.3) |
| .39 | FCN3022A394K-X | 0.303±0.016 (7.7±0.4) | 0.217±0.016 (5.5±0.4) | 0.134±0.012 (3.4±0.3) |
| .47 | FCN3022A474K-X | 0.303±0.016 (7.7±0.4) | 0.217±0.016 (5.5±0.4) | 0.157±0.012 (4.0±0.3) |
| .56 | FCN3925A564K-V | 0.386±0.016 (9.8±0.4) | 0.248±0.016 (6.3±0.4) | 0.118±0.012 (3.0±0.3) |
| .68 | FCN3925A684K-V | 0.386±0.016 (9.8±0.4) | 0.248±0.016 (6.3±0.4) | 0.142±0.012 (3.6±0.3) |
| .82 | FCN3925A824K-V | 0.386±0.016 (9.8±0.4) | 0.248±0.016 (6.3±0.4) | 0.169±0.012 (4.3±0.3) |
| 1.0 | FCN3925A105K-V | 0.386±0.016 (9.8±0.4) | 0.248±0.016 (6.3±0.4) | 0.201±0.012 (5.1±0.3) |
| 250 Vdc | | | | |
| .0010 | FCN1913E102K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0012 | FCN1913E122K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0015 | FCN1913E152K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0018 | FCN1913E182K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0022 | FCN1913E222K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0027 | FCN1913E272K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0033 | FCN1913E332K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0039 | FCN1913E392K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0047 | FCN1913E472K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0056 | FCN1913E562K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0068 | FCN1913E682K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0082 | FCN1913E822K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .010 | FCN1913E103K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .012 | FCN1913E123K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .015 | FCN1913E153K-E1* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .018 | FCN1913E183K-E2* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.079±0.008 (2.0±0.2) |
| .022 | FCN1913E223K-E2* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.094±0.008 (2.4±0.2) |
| .027 | FCN1913E273K-E4* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.110±0.008 (2.8±0.2) |
| .033 | FCN1913E333K-E3* | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.126±0.008 (3.2±0.2) |
| .039 | FCN2416E393K-D2* | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.079±0.008 (2.0±0.2) |
| .047 | FCN2416E473K-D3* | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.079±0.008 (2.0±0.2) |
| .056 | FCN2416E563K-D4* | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.094±0.008 (2.4±0.2) |
| .068 | FCN2416E683K-D5* | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.110±0.008 (2.8±0.2) |
| .082 | FCN2420E823K-B* | 0.236±0.008 (6.0±0.2) | 0.197±0.016 (5.0±0.4) | 0.126±0.012 (3.2±0.3) |
| .10 | FCN2420E104K-B* | 0.236±0.008 (6.0±0.2) | 0.197±0.016 (5.0±0.4) | 0.150±0.012 (3.8±0.3) |
| .12 | FCN2420E124K-B* | 0.236±0.008 (6.0±0.2) | 0.197±0.016 (5.0±0.4) | 0.177±0.012 (4.5±0.3) |
| .15 | FCN2825E154K-Y | 0.280±0.016 (7.1±0.4) | 0.248±0.016 (6.3±0.4) | 0.138±0.012 (3.5±0.3) |
| .18 | FCN2825E184K-Y | 0.280±0.016 (7.1±0.4) | 0.248±0.016 (6.3±0.4) | 0.161±0.012 (4.1±0.3) |
| .22 | FCN2825E224K-Y | 0.280±0.016 (7.1±0.4) | 0.248±0.016 (6.3±0.4) | 0.201±0.012 (5.1±0.3) |
| .27 | FCN3925E274K-V | 0.386±0.020 (9.8±0.5) | 0.248±0.016 (6.3±0.4) | 0.154±0.012 (3.9±0.3) |

* also available in 5% (J) tolerance

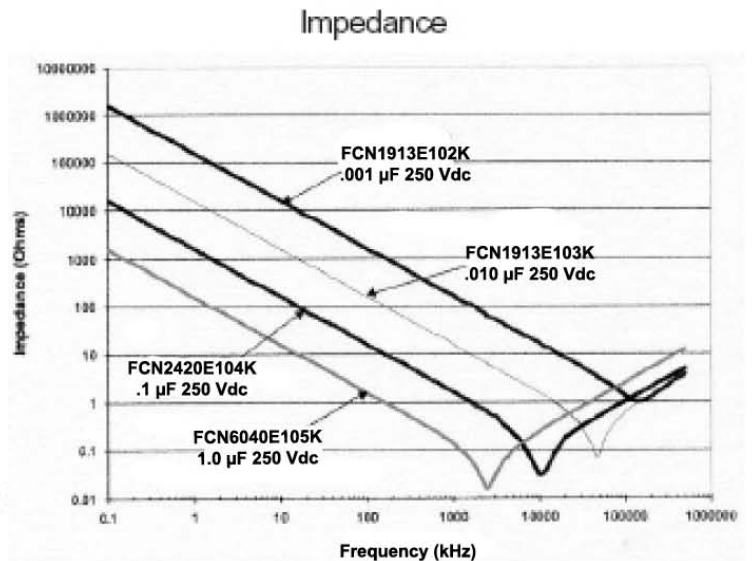
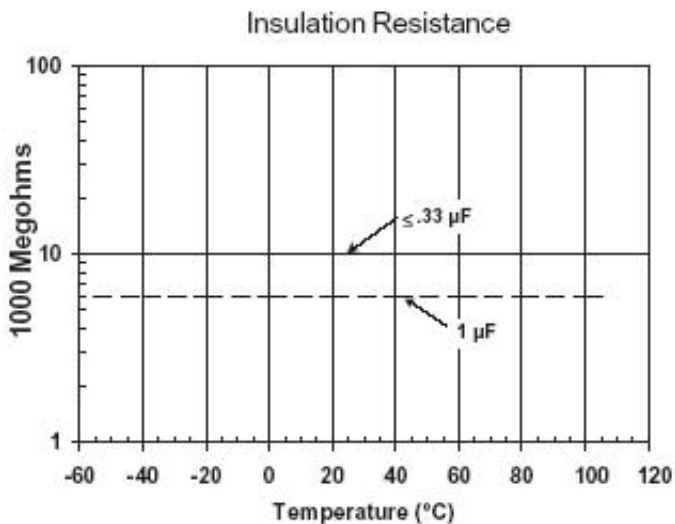
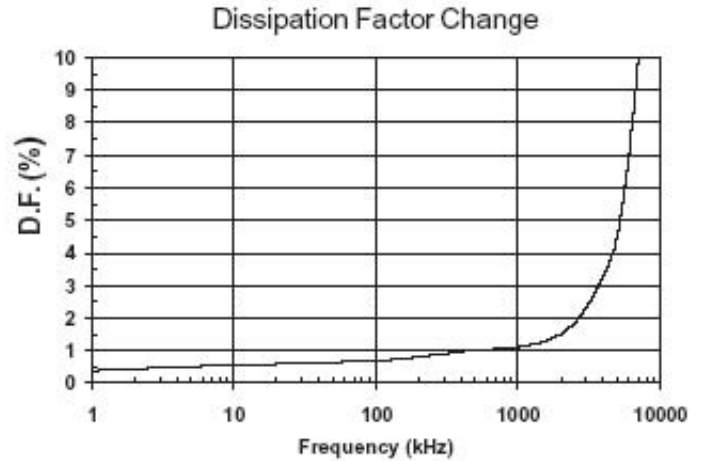
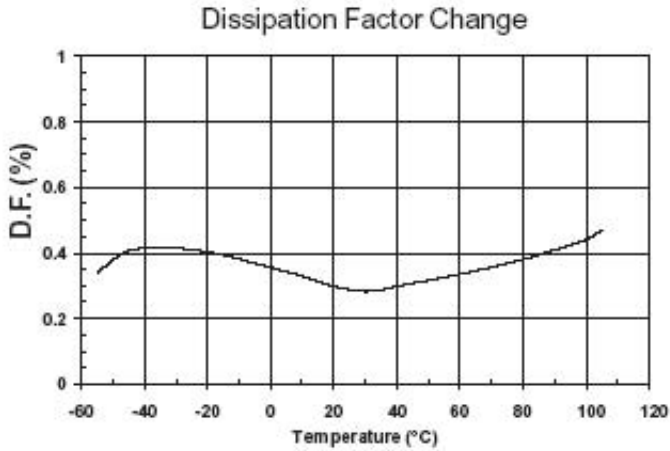
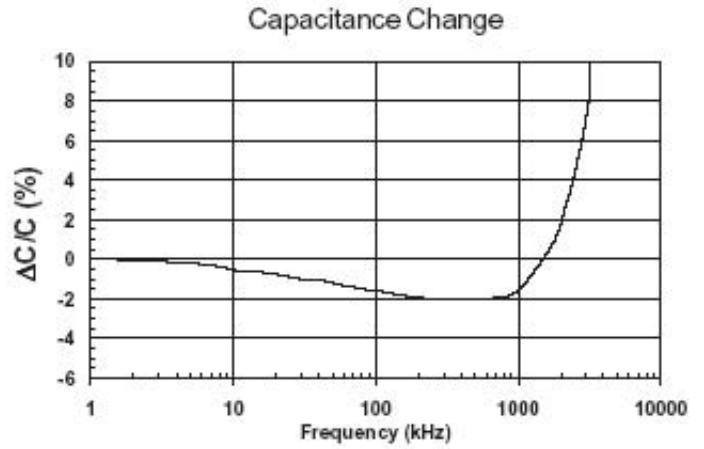
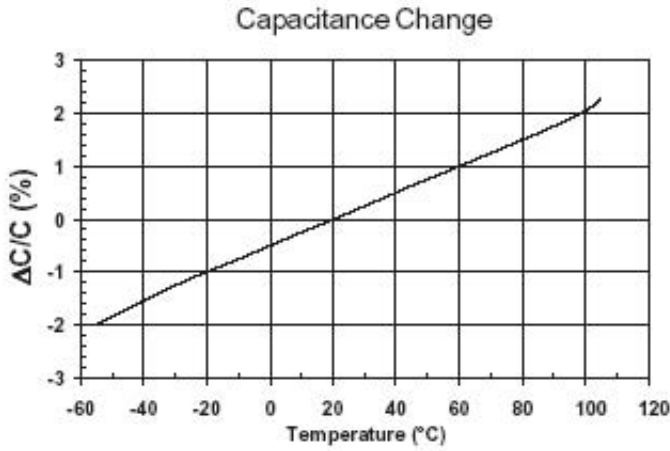
Type FCN Surface Mount Film Capacitors

| Cap (μ F) | Catalog Part Number | L in (mm) | W in (mm) | T in (mm) |
|-------------------|------------------------|------------------------|------------------------|-----------------------|
| 250 Vdc | | | | |
| .33 | FCN3925E334K-V | 0.386±0.020 (9.8±0.5) | 0.248±0.016 (6.3±0.4) | 0.189±0.012 (4.8±0.3) |
| .39 | FCN3931E394K-U | 0.386±0.020 (9.8±0.5) | 0.315±0.016 (8.0±0.4) | 0.173±0.012 (4.4±0.3) |
| .47 | FCN3931E474K-U | 0.386±0.020 (9.8±0.5) | 0.315±0.016 (8.0±0.4) | 0.209±0.012 (5.3±0.3) |
| .56 | FCN6031E564K-T | 0.598±0.020 (15.2±0.5) | 0.315±0.016 (8.0±0.4) | 0.146±0.012 (3.7±0.3) |
| .68 | FCN6031E684K-T | 0.598±0.020 (15.2±0.5) | 0.315±0.016 (8.0±0.4) | 0.173±0.012 (4.4±0.3) |
| .82 | FCN6040E824K-S | 0.598±0.020 (15.2±0.5) | 0.394±0.016 (10.0±0.4) | 0.165±0.012 (4.2±0.3) |
| 1.0 | FCN6040E105K-S | 0.598±0.020 (15.2±0.5) | 0.394±0.016 (10.0±0.4) | 0.201±0.012 (5.1±0.3) |
| 400 Vdc | | | | |
| .0010 | FCN1913G102J-E1 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0012 | FCN1913G122J-E1 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0015 | FCN1913G152J-E1 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0018 | FCN1913G182J-E1 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0022 | FCN1913G222J-E1 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0027 | FCN1913G272J-E1 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0033 | FCN1913G332J-E1 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0039 | FCN1913G392J-E1 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0047 | FCN1913G472J-E1 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.055±0.008 (1.4±0.2) |
| .0056 | FCN1913G562J-E2 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.079±0.008 (2.0±0.2) |
| .0068 | FCN1913G682J-E2 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.079±0.008 (2.0±0.2) |
| .0082 | FCN1913G822J-E4 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.094±0.008 (2.4±0.2) |
| .010 | FCN1913G103J-E3 | 0.189±0.008 (4.8±0.2) | 0.130±0.012 (3.3±0.3) | 0.110±0.008 (2.8±0.2) |
| .012 | FCN2416G123J-D2 | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.079±0.008 (2.0±0.2) |
| .015 | FCN2416G153J-D3 | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.079±0.008 (2.0±0.2) |
| .018 | FCN2416G183J-D4 | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.110±0.008 (2.8±0.2) |
| .022 | FCN2416G223J-D5 | 0.236±0.008 (6.0±0.2) | 0.161±0.012 (4.1±0.3) | 0.126±0.012 (3.2±0.3) |
| .027 | FCN2420G273J-B | 0.236±0.008 (6.0±0.2) | 0.197±0.016 (5.0±0.4) | 0.118±0.012 (3.0±0.3) |
| .033 | FCN2420G333J-B | 0.236±0.008 (6.0±0.2) | 0.197±0.016 (5.0±0.4) | 0.142±0.012 (3.6±0.3) |
| .039 | FCN2820G393J-Z | 0.280±0.016 (7.1±0.4) | 0.197±0.016 (5.0±0.4) | 0.126±0.012 (3.2±0.3) |
| .047 | FCN2820G473J-Z | 0.280±0.016 (7.1±0.4) | 0.197±0.016 (5.0±0.4) | 0.150±0.012 (3.8±0.3) |
| .056 | FCN2825G563J-Y | 0.280±0.016 (7.1±0.4) | 0.248±0.016 (6.3±0.4) | 0.142±0.012 (3.6±0.3) |
| .068 | FCN2825G683J-Y | 0.280±0.016 (7.1±0.4) | 0.248±0.016 (6.3±0.4) | 0.173±0.012 (4.4±0.3) |
| .082 | FCN3925G823J-V | 0.386±0.016 (9.8±0.4) | 0.248±0.016 (6.3±0.4) | 0.134±0.012 (3.4±0.3) |
| .10 | FCN3925G104J-V | 0.386±0.016 (9.8±0.4) | 0.248±0.016 (6.3±0.4) | 0.157±0.012 (4.0±0.3) |
| .12 | FCN3931G124J-U | 0.386±0.016 (9.8±0.4) | 0.315±0.016 (8.0±0.4) | 0.150±0.012 (3.8±0.3) |
| .15 | FCN3931G154J-U | 0.386±0.016 (9.8±0.4) | 0.315±0.016 (8.0±0.4) | 0.181±0.012 (4.6±0.3) |

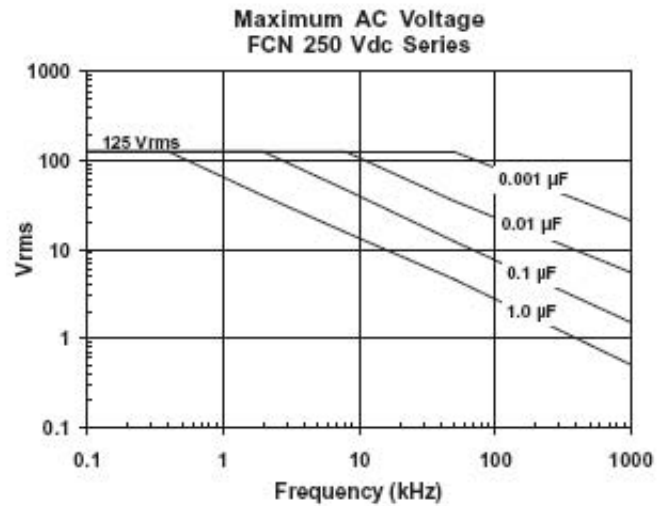
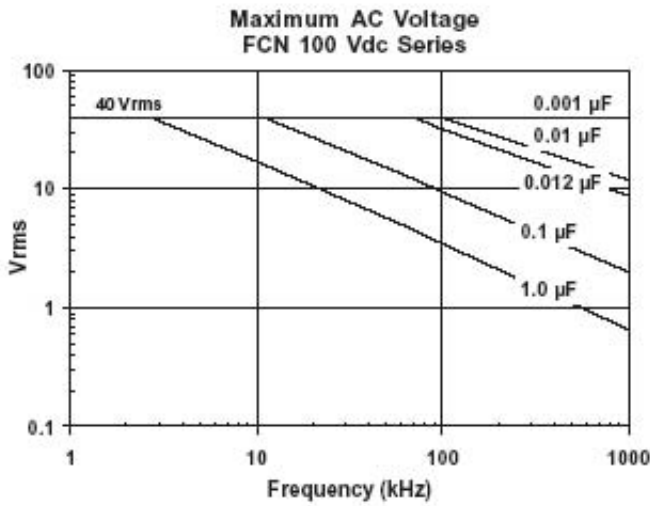
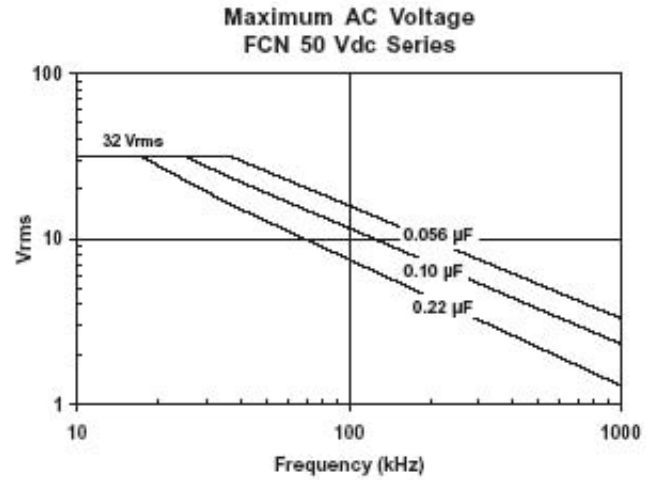
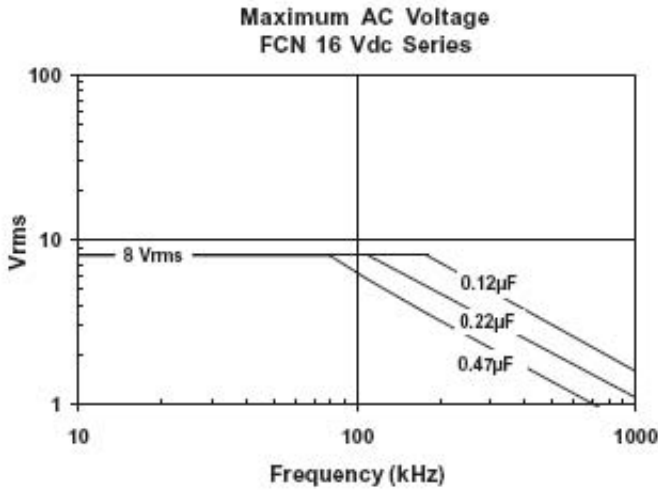
Type FCN Surface Mount Film Capacitors

Typical Temperature Characteristics

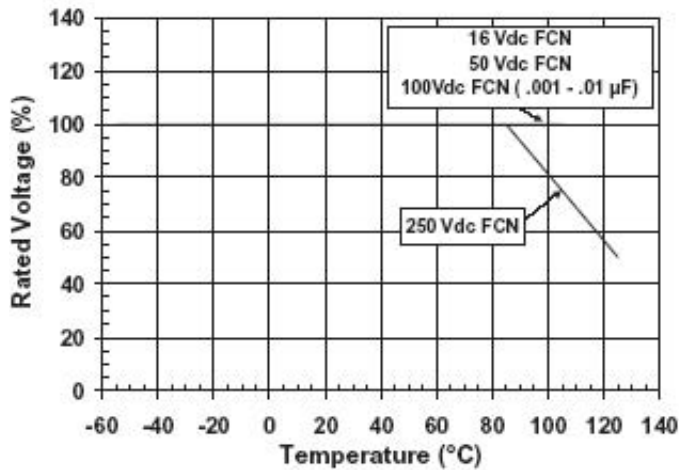
Typical Frequency Characteristics



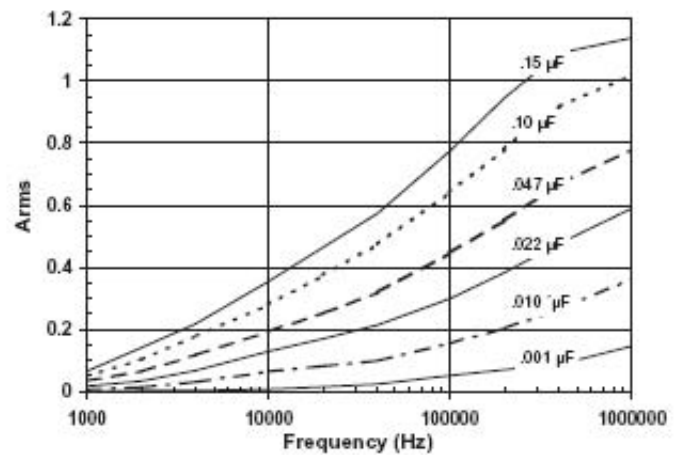
Vrms vs. Frequency Characteristics



Voltage Derating vs Temperature



Maximum RMS Current vs Frequency 400 Vdc FCN



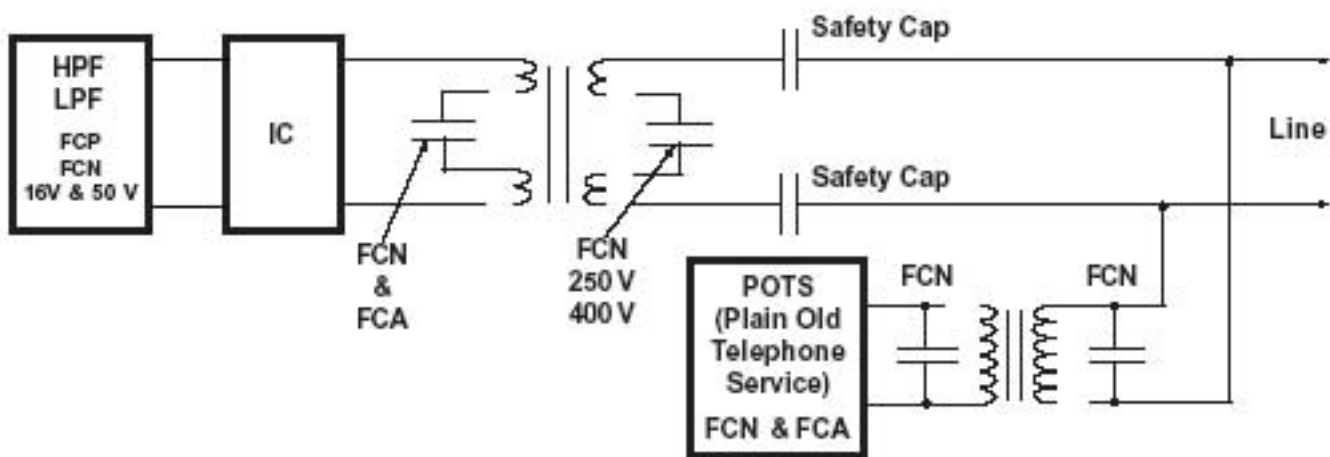
Type FCN Surface Mount Film Capacitors

Pulse Handling Capability

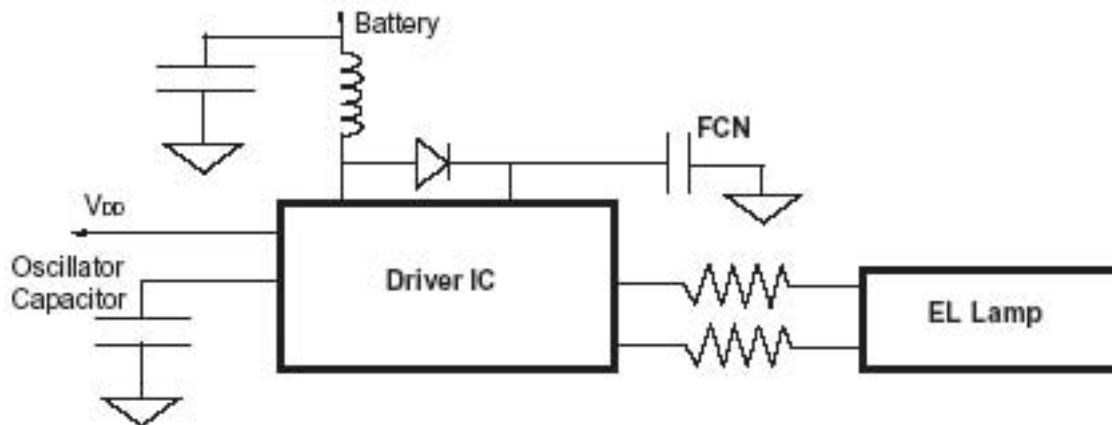
| Capacitance (μF) | Voltage (Vdc) | dV/dt (volts/ μsec) | Capacitance (μF) | Voltage (Vdc) | dV/dt (volts/ μsec) | Capacitance (μF) | Voltage (Vdc) | dV/dt (volts/ μsec) |
|----------------------------------|------------------|------------------------------------|----------------------------------|------------------|------------------------------------|----------------------------------|------------------|------------------------------------|
| .12 - .22 | 16 | 60 | .0039 | 100 | 530 | .001 - .0039 | 250 | 615 |
| .27 - .47 | 16 | 40 | .0047 | 100 | 480 | .0047 - .033 | 250 | 360 |
| .056 - .10 | 50 | 190 | .0056 | 100 | 450 | .039 - .12 | 250 | 240 |
| .12 - .22 | 50 | 130 | .0068 | 100 | 410 | .15 - .22 | 250 | 190 |
| .001 | 100 | 1000 | .0082 | 100 | 370 | .27 - .47 | 250 | 115 |
| .0012 | 100 | 920 | .01 | 100 | 340 | .56 - 1.0 | 250 | 65 |
| .0015 | 100 | 830 | .012 - .082 | 100 | 320 | .001 - .0039 | 400 | 615 |
| .0018 | 100 | 760 | .10 - .15 | 100 | 210 | .0047 - .01 | 400 | 360 |
| .0022 | 100 | 690 | .18 - .33 | 100 | 120 | .012 - .033 | 400 | 240 |
| .0027 | 100 | 630 | .39 - .47 | 100 | 100 | .039 - .068 | 400 | 190 |
| .0033 | 100 | 570 | .056 - 1.0 | 100 | 70 | .082 - .15 | 400 | 115 |

Typical Applications

DC Blocking for xDSL



Integration for Electroluminescent (EL) Driver



With no piezoelectric effects to deal with, the SMT film capacitor will not create electrical noise in signal circuits or buzzing in power circuits.