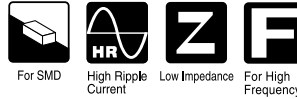


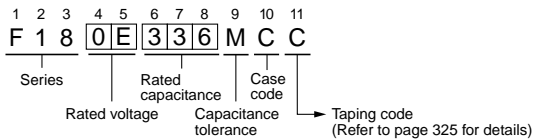
F18



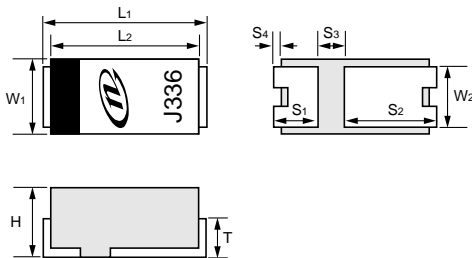
- Higher Capacitance.
- Low ESR, Low ESL, High ripple current.
- Resin-molded Chip.
- Designed for surface mounting on high density PC board.
- Two terminals product for high frequency.
- Compliant to the RoHS directive (2002/95/EC).



Type numbering system (Example : 2.5V 33μF)



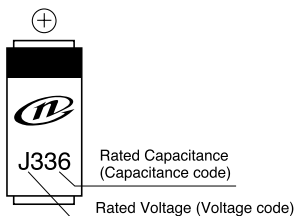
Dimensions



| Case Code | L1 | L2 | W1 | W2 | H | T | S1 | S2 | S3 | S4 |
|-----------|-----------|-----------|-----------|-----------|---------|-----------|------------|------------|-----------|--------|
| C | 6.5 ± 0.2 | 6.0 ± 0.2 | 3.2 ± 0.2 | 2.5 ± 0.2 | 1.9MAX. | 1.0 ± 0.2 | 1.65 ± 0.2 | 3.85 ± 0.2 | 1.0 ± 0.2 | (0.25) |

S4 dimension only for reference

Marking



Specifications

| Item | Performance Characteristics | | |
|------------------------------------|--|---|---|
| Category Temperature Range | -55 to +105°C | | |
| Capacitance Tolerance | ±20% (at 120Hz) | | |
| Dissipation Factor | Refer to next table | | |
| ESR | Refer to next table | | |
| Leakage Current | After 5 minute's application of rated voltage, leakage current is not more than 0.1CV | | |
| Damp Heat (Steady State) | At 60°C 90%RH 500hours (No voltage applied) | | |
| | Capacitance Change | Within -20 to +30% of the initial specified value | |
| | Dissipation Factor | 200% or less than the Initial specified value | |
| | ESR | 200% or less than the Initial specified value | |
| Temperature Cycles | -55°C / +105°C 30minutes each 5cycle | | |
| | Capacitance Change | Within ±20% of the Initial specified value | |
| | Dissipation Factor | 200% or less than the Initial specified value | |
| | ESR | 200% or less than the Initial specified value | |
| Temperature Change Characteristics | | -55°C | +105°C |
| | Capacitance Change | Within -20 to +0% | Within -0 to +50% |
| | Dissipation Factor | Initial specified value or less | 150% or less than the Initial specified value |
| | ESR | Initial specified value or less | 150% or less than the Initial specified value |
| Resistance to Soldering Heat | Capacitor meets the following characteristics after solder reflow (Peak: 240°C for 10sec, 2cycle). Temperature should be measured at the terminals. | | |
| | Capacitance Change | Within ±20% of the Initial specified value | |
| | Dissipation Factor | Initial specified value or less | |
| | ESR | Initial specified value or less | |
| Surge | After application of 115% of rating voltage at the rate of 30 seconds ON, 30 seconds OFF, for 1000 successive test cycles at 105°C, capacitors meet the characteristics requirements listed below. | | |
| | Capacitance Change | Within ±20% of the initial specified value | |
| | Dissipation Factor | 200% or less than the Initial specified value | |
| | ESR | 200% or less than the Initial specified value | |
| Endurance | After 2000 hours' application of rated voltage at 105°C, they will meet the specified value for life characteristics listed below. | | |
| | Capacitance Change | Within ±20% of the initial value | |
| | Dissipation Factor | 200% or less than the Initial specified value | |
| | ESR | 200% or less than the Initial specified value | |
| Marking | Printed on the package top. | | |

Standard ratings

| Cap.(μF) | Code | V | | |
|----------|------|-----|-----|-----|
| | | 2.5 | 4 | 6.3 |
| 22 | 226 | 0E | 0G | 0J |
| 33 | 336 | C | C | C |
| 47 | 476 | C | C | (C) |
| 68 | 686 | C | (C) | |
| 100 | 107 | (C) | | |

() The series in parentheses are being developed. Please contact to your local Nichicon sales office when these series are being designed in your application.

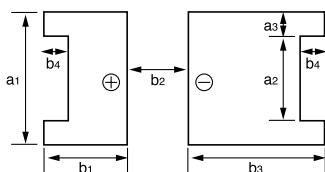
F18

■ Ratings Table

< Standard >

| Rated Volt (V) | Rated Capacitance (μF) | Case code | Part Number | Leakage Current (μA) | Dissipation Factor (% @ 120Hz) | ESR (mΩ @ 100kHz) | Rated Ripple (Arms @ 100kHz) |
|----------------|------------------------|-----------|-------------|----------------------|--------------------------------|-------------------|------------------------------|
| 2.5 | 33 | C | F180E336MCC | 8.3 | 5 | 70.0 | 1.1 |
| | 47 | C | F180E476MCC | 11.8 | 5 | 70.0 | 1.1 |
| | 68 | C | F180E686MCC | 17.0 | 5 | 60.0 | 1.2 |
| 4 | 22 | C | F180G226MCC | 8.8 | 5 | 70.0 | 1.1 |
| | 33 | C | F180G336MCC | 13.2 | 5 | 70.0 | 1.1 |
| | 47 | C | F180G476MCC | 18.8 | 5 | 60.0 | 1.2 |
| 6.3 | 22 | C | F180J226MCC | 13.9 | 5 | 70.0 | 1.1 |
| | 33 | C | F180J336MCC | 20.8 | 5 | 60.0 | 1.2 |

■ Layout Land Pattern (Example)



(mm)

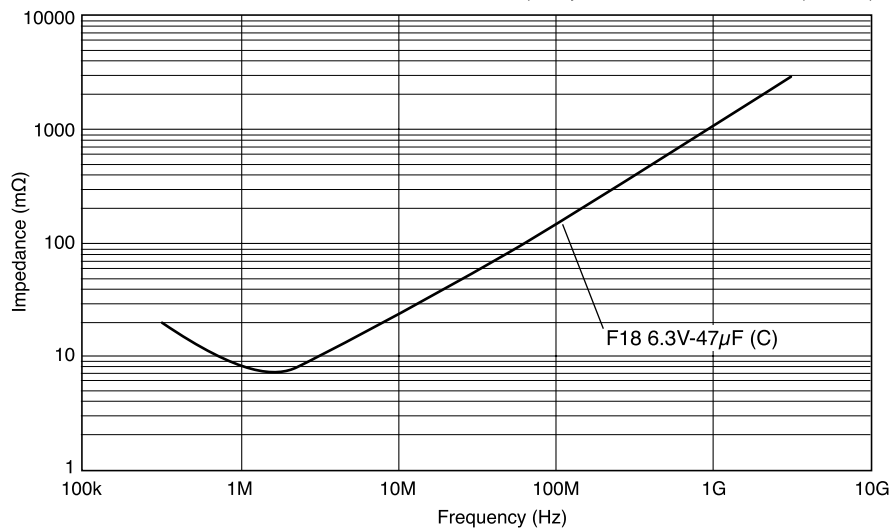
| Case | a1 | a2 | a3 | b1 | b2 | b3 | b4 |
|------|-----|-----|-----|------|-----|------|------|
| C | 3.0 | 1.0 | 1.0 | 2.25 | 2.0 | 3.45 | 1.05 |

The land for high density implementation (The fillet forms even following dimensions)

| Case | a1 | a2 | a3 | b1 | b2 | b3 | b4 |
|------|-----|-----|------|------|-----|------|------|
| C | 2.7 | 1.0 | 0.85 | 1.95 | 2.0 | 3.15 | 0.75 |

■ Frequency characteristic

{ The characteristics are measured by a network analyzer and converted from S21 to impedance. }



< Notice > The graph illustrates representative data. Please use this for reference only.