

F18



For SMD

High Ripple
Current

Low Impedance

For High
Frequency

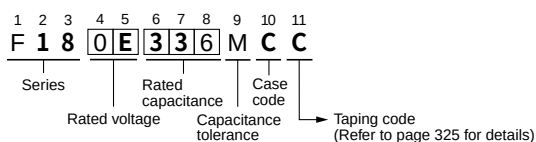
NEW

- 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).

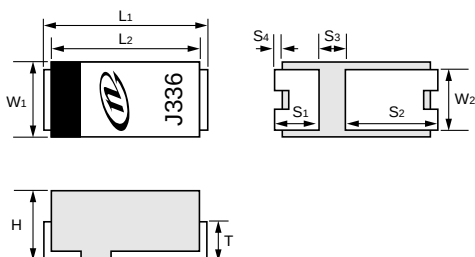
Specifications

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 Leakage Current-----Initial specified value or less		
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 Leakage Current-----Initial specified value or less		
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	Leakage Current	Initial specified value or less	10 times Initial specified value
	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 Leakage Current-----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 Leakage Current-----Initial specified value or less		
Endurance	After 2000 hours' application of rated voltage at 105°C, they will meet the specified value for life charecteristics 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 Leakage Current-----Initial specified value or less		
Marking	Printed on the package top.		

Type numbering system (Example : 2.5V 33μF)



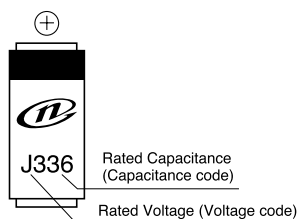
Dimensions



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



Standard ratings

Cap. (μF)	Code	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.

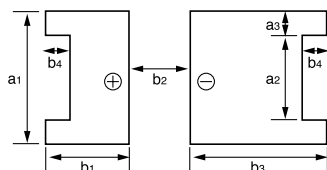
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■ Ratings Table

< 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)

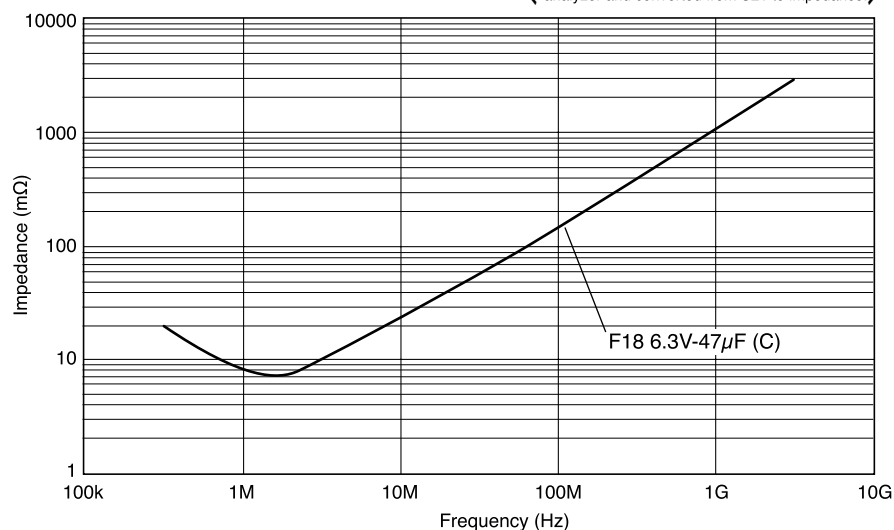
Case	a1	a2	a3	b1	b2	b3	b4
C	3.0	1.0	1.0	2.25	2.0	3.45	1.05

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.