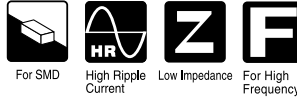


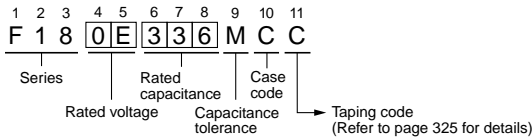
F18



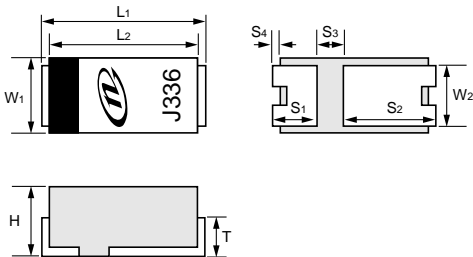
- Higher Capacitance.
- Low ESR, Low ESL, High ripple current.
- Resin-molded Chip.
- Designed for surface mounting on high density PC board.
- Two terminals product for high frequency.
- Compliant to the RoHS directive (2002/95/EC).



Type numbering system (Example : 2.5V 33μF)



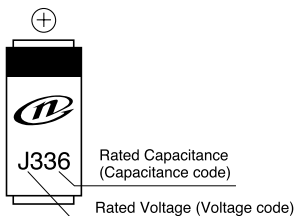
Dimensions



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.

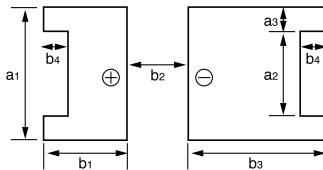
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■ Ratings Table

< 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)

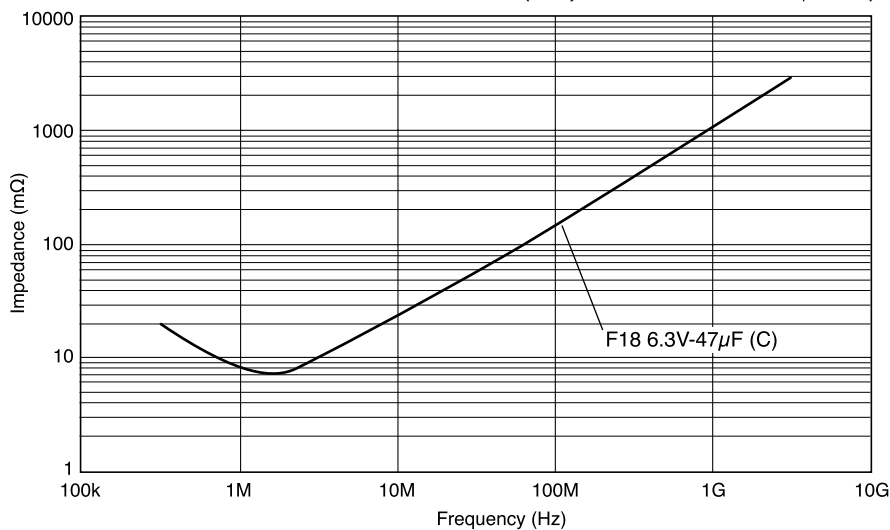
Case	a1	a2	a3	b1	b2	b3	b4
C	3.0	1.0	1.0	2.25	2.0	3.45	1.05

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.