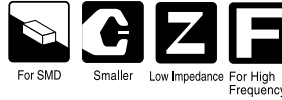
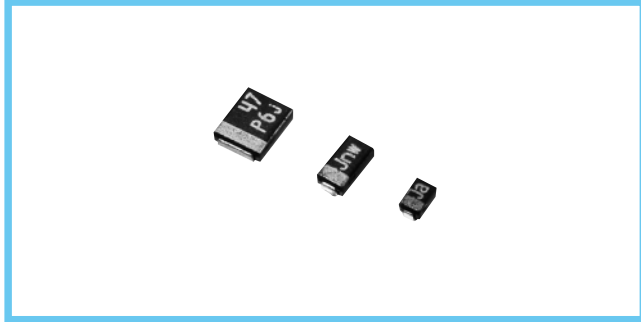


# F31

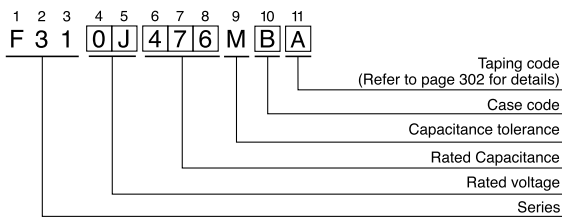
Conductive Polymer Resin-molded Chip, Compact Series



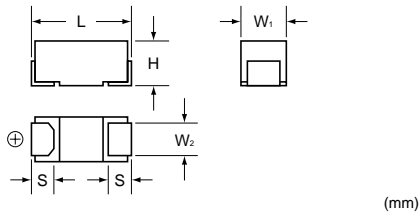
● Adapted to the RoHS directive (2002/95/EC).



### ■ Type numbering system (Example : 6.3V 47μF)

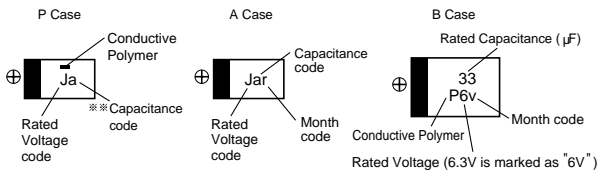


### ■ Dimensions



Case code	L	W <sub>1</sub>	W <sub>2</sub>	H	S
P	2.0±0.2	1.25±0.1	0.9±0.1	1.1±0.1	0.5±0.2
A	3.2±0.2	1.6±0.2	1.2±0.1	1.1±0.1	0.8±0.2
B	3.4±0.2	2.8±0.2	2.3±0.1	1.1±0.1	0.8±0.2

### ■ Marking



### ■ Standard ratings

Cap. (μF)	V					Capacitance code
	2.5	4	6.3	10		
10	106		P	P	A	a
22	226	P	P	(P) · A	(A) · B	J
33	336	A	A	(A) · B	B	n
47	476	A	(A) · B	B	B	s
68	686			B		
100	107	B	B	(B)		

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

### ■ Specifications

Item	Performance Characteristics
Category Temperature Range	-55 to +105°C (Rated temperature + 85°C)
Capacitance Tolerance	±20% (120Hz)
Dissipation Factor(at 120Hz)	Refer to the list below
ESR (100kHz)	Refer to the list below
Leakage Current	·After 5 minutes' application of rated voltage, leakage current at 20°C is not more than 0.1CV
Ripple Current	Refer to the list below
Damp Heat (Steady State)	At 60°C, 90 to 95% R.H. 500hours (No voltage applied) Capacitance Change···Within -20 to +30% of initial value Dissipation Factor·····1.5 times Initial specified value or less Leakage Current·····Initial specified value or less
Temperature Cycles	-55°C / +105°C 30 minutes each 5 cycle Capacitance Change···Within ±20% of initial value Dissipation Factor·····Initial specified value or less Leakage Current·····Initial specified value or less
Resistance to Soldering Heat	Test Condition;10 second reflow at 240°C Capacitance Change···Within ±20% of initial value Dissipation Factor·····1.3 times Initial specified value or less Leakage Current·····Initial specified value or less
Surge	After application of surge voltage in series with a 1kΩ resistor at the rate of 30 seconds ON, 30 seconds OFF, for 1000 successive test cycles at 85°C, capacitors meet the characteristics requirements listed below. Capacitance Change···Within ±20% of initial value Dissipation Factor·····Initial specified value or less Leakage Current·····Initial specified value or less
Endurance 1	After 1000 hours' application of rated voltage in series with a 3Ω resistor at 85°C. Capacitance Change···Within ±20% of initial value Dissipation Factor···1.5 times Initial specified value or less Leakage Current···Initial specified value or less
Endurance 2	After 1000 hours' application of rated voltage in series with a 3Ω resistor at 105°C, capacitors meet the characteristic requirements listed below Capacitance Change···Within ±20% of initial value Dissipation Factor···3 times Initial specified value or less Leakage Current···Initial specified value or less
Shear Test	After applying the pressure load of 5N for 10±1 seconds horizontally to the center of capacitor side body which has no electrode and has been soldered beforehand on an aluminum substrate, there shall be found neither exfoliation nor its sign at the terminal electrode. 
Terminal Strength	Keeping a capacitor surface-mounted on a substrate upside down and supporting the substrate at both of the opposite bottom points 45mm apart from the center of the capacitor, the pressure strength is applied with a specified jig at the center of the substrate so that the substrate may bend by 1mm as illustrated. Then, there shall be found no remarkable abnormality on the capacitor terminals. 

\* As for the surge voltage refer to page 301 for details.

### ■ Standard ratings

Rated Volt (V)	Rated Capacitance (μF)	Case code	Part Number	Leakage Current (μA)	Dissipation Factor (%@120Hz)	ESR (mΩ@100kHz)	Rated Ripple (mA@100kHz)
2.5	22	P	F310E226MPA	5.5	6	200	354
	33	A	F310E336MAA	8.3	6	150	632
	47	A	F310E476MAA	11.8	6	150	632
	100	B	F310E107MBA	25.0	8	70	1035
4	10	P	F310G106MPA	4.0	6	200	354
	22	P	F310G226MPA	8.8	6	200	354
	33	A	F310G336MAA	13.2	6	150	632
	47	B	F310G476MBA	18.8	8	70	1035
6.3	100	B	F310G107MBA	40.0	8	70	1035
	10	P	F310J106MPA	6.3	6	200	354
	22	A	F310J226MAA	13.9	6	200	548
	33	B	F310J336MBA	20.8	8	70	1035
10	47	B	F310J476MBA	29.6	8	70 (55)*	1035
	68	B	F310J686MBA	42.8	8	70	1035
	10	A	F311A106MAA	10.0	6	200	548
	22	B	F311A226MBA	22.0	8	70	1035
10	33	B	F311A336MBA	33.0	8	70	1035
	47	B	F311A476MBA	47.0	8	70	1035

\* ( ) ESR specification types are also available upon request.

Please contact to your local Nichicon sales office when these series are being designed in your application.