SOLID TANTALUM ELECTROLYTIC CAPACITORS

nichicon

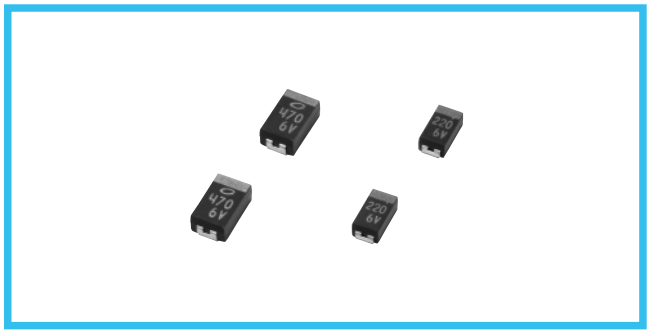
F91

LOW ESR
Resin-molded Chip

For SMD

For High Frequency

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



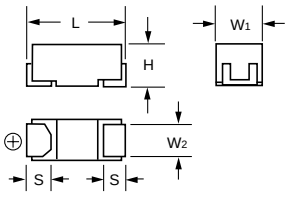
■ Type numbering system (Example : 10V 100µF)

1	2	3	4	5	6	7	8	9	10	11
F	9	1	1	A	1	0	7	M	C	

- 11: Taping code (Refer to page 323 for details)
- 10: Case code
- 9: Capacitance tolerance
- 8 7 6: Rated capacitance
- 5 4: Rated voltage
- 3 2 1: Series

■ Drawing

C・N Case

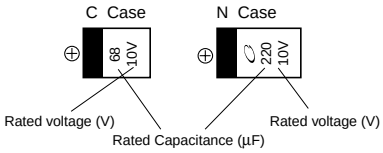


■ Dimensions

(mm)

Case Code	L	W1	W2	H	S
C	6.0 ± 0.2	3.2 ± 0.2	2.2 ± 0.1	2.5 ± 0.2	1.3 ± 0.2
N	7.3 ± 0.2	4.3 ± 0.2	2.4 ± 0.1	2.8 ± 0.2	1.3 ± 0.2

■ Marking



■ Standard Ratings

Cap. (µF) \ V	Code	4	6.3	10
		0G	0J	1A
68	686			C
100	107		C	C
150	157	C	C	N
220	227	C	C・N	N
330	337	N	N	N
470	477	N	N	
680	687	N		

■ Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +125˚C (Rated temperature : 85˚C)
Capacitance Tolerance	±20%, ±10% (at 120Hz)
Dissipation Factor (120Hz)	Refer to the list below.
ESR (100kHz)	Refer to the list below.
Leakage Current	• After 1 minute's application of rated voltage, leakage current at 20˚C is not more than 0.01CV or 0.5µA, whichever is greater. • After 1 minute's application of rated voltage, leakage current at 85˚C is not more than 0.1CV or 5µA, whichever is greater. • After 1 minute's application of derated voltage, leakage current at 125˚C is not more than 0.125CV or 6.3µA, whichever is greater.
Capacitance Change by Temperature	+15% Max. (at +125˚C) +10% Max. (at +85˚C) −10% Max. (at −55˚C)
Damp Heat (Steady State)	At 40˚C 90 to 95% R.H. 500 hours (No voltage applied) Capacitance Change Within ±10% of the initial value Dissipation Factor·····Initial specified value or less Leakage Current·····Initial specified value or less
Temperature Cycles	−55˚C / +125˚C 30 minutes each 5 cycles Capacitance Change Within ±5% of the initial value Dissipation Factor·····Initial specified value or less Leakage Current·····Initial specified value or less
Resistance to Soldering Heat	10 seconds reflow at 260˚C, 5 seconds immersion at 260˚C Capacitance Change Within ±5% of the initial value Dissipation Factor·····Initial specified value or less Leakage Current·····Initial specified value or less
Surge*	After application of surge in series with a 33Ω resistor at the rate of 30 seconds ON, 30 seconds OFF, for 1000 sucessive test cycles at 85˚C, capacitors meet the characteristic requirements listed below. Capacitance Change····Within ±5% of the initial value Dissipation Factor·····Initial specified value or less Leakage Current·····Initial specified value or less
Endurance*	After 2000 hours' application of rated voltage in series with a 3Ω resistor at 85˚C, or derated voltage in series with a 3Ω resistor at 125˚C, capacitors meet the characteristics requirements listed below. Capacitance Change.....Within ±10% of the initial value Dissipation Factor.....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 a substrate, there shall be found neither exfoliation nor its sign at the terminal electrode. 5N (0.51kg・f) For 10±1 seconds
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. R230 20 1mm 45 45

* As for the surge and derated voltage at 125˚C, refer to page 322 for details.

Rated Volt	Rated Capacitance (µF)	Case code	Part Number	Leakage Current (µA)	Disspation Factor (% @120Hz)	ESR (mΩ@100kHz)
4V	150	C	F910G157MCC	6.0	12	250
	220	C	F910G227MCC	8.8	12	250
	330	N	F910G337MNC	13.2	10	100
	470	N	F910G477MNC	18.8	16	100
	680	N	F910G687MNC	27.2	18	100
6.3V	100	C	F910J107MCC	6.3	8	250
	150	C	F910J157MCC	9.5	12	250
	220	C	F910J227MCC	13.9	14	250
	220	N	F910J227MNC	13.9	10	100
	330	N	F910J337MNC	20.8	14	100
	470	N	F910J477MNC	29.6	16	100
10V	68	C	F911A686MCC	6.8	8	300
	100	C	F911A107MCC	10.0	10	250
	150	N	F911A157MNC	15.0	10	100
	220	N	F911A227MNC	22.0	12	100
	330	N	F911A337MNC	33.0	18	100

※ In case of capacitance tolerance ± 10% type, K will be put at 9th digit of type numbering system.