

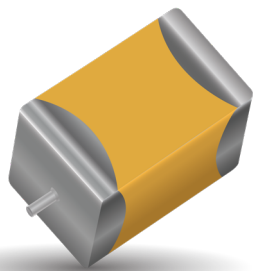


**THE DATASHEET OF  
FCHP0402E1000BST1**



# F72/F75 Series

## Low Profile and High CV Conformal Coated Chip



### FEATURES

- Compliant to the RoHS3 directive 2015/863/EU
- SMD Conformal
- Small and Low Profile
- 100% Surge Current Tested

### APPLICATIONS

- Smartphone
- Mobile Phone
- Wireless Module
- Hearing Aid



### CASE DIMENSIONS:

millimeters (inches)

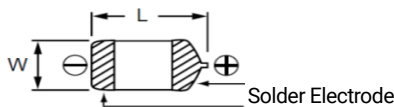
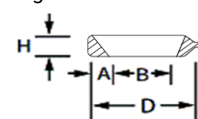
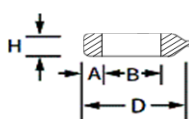
Code	EIA Code	EIA Metric	L	W	H	A	B	D*
<b>F72 Case Dimensions</b>								
M	2824	7260-20	7.20±0.30 (0.283±0.012)	6.00±0.30 (0.236±0.012)	2.00 Max. (0.079 Max)	1.30±0.40 (0.051±0.016)	3.80±0.60 (0.150±0.024)	6.20 (0.244)
<b>F75 Case Dimensions</b>								
C	2813	7132-28	7.10±0.30 (0.280±0.012)	3.20±0.30 (0.126±0.012)	2.50±0.30 (0.098±0.012)	1.30±0.30 (0.051±0.012)	3.60±0.60 (0.142±0.024)	6.00 (0.236)
M	2824	7260-28	7.20±0.30 (0.283±0.012)	6.00±0.30 (0.236±0.012)	2.80 Max. (0.110 Max)	1.30±0.40 (0.051±0.016)	3.80±0.60 (0.150±0.024)	6.20 (0.244)
R	2824	7260-38	7.20±0.30 (0.283±0.012)	6.00±0.30 (0.236±0.012)	3.50±0.30 (0.138±0.012)	1.30±0.40 (0.051±0.016)	3.80±0.60 (0.150±0.024)	6.20 (0.244)
U	2813	7132-20	7.10±0.30 (0.280±0.012)	3.20±0.30 (0.126±0.012)	2.00 Max. (0.079 Max)	1.30±0.30 (0.051±0.012)	3.60±0.60 (0.142±0.024)	6.00 (0.236)

\*D dimension only for reference

### F72/F75

Double Face Electrode

Single Face Electrode



### HOW TO ORDER

**F72**

Type

**1A**

Rated Voltage

**477**

Capacitance Code  
pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)

**M**

Tolerance  
K=±10%  
M=±20%

**M**

Case Size  
See table above

Packaging  
See Tape & Reel Packaging Section

Specification Suffix  
AH1 = Low ESR

**AQ2 or Q2**

Single Face Electrode

**F75**

Type

**1A**

Rated Voltage

**157**

Capacitance Code  
pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)

**M**

Tolerance  
K=±10%  
M=±20%

**C**

Case Size  
See table above

Packaging  
See Tape & Reel Packaging Section

**AQ2**

Single Face Electrode

### TECHNICAL SPECIFICATIONS

Category Temperature Range:	-55 to +125°C
Rated Temperature:	+85°C
Capacitance Tolerance:	±20%, ±10% at 120Hz
Dissipation Factor:	Refer to next page
ESR 100kHz:	Refer to next page
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

# F72/F75 Series

## Low Profile and High CV Conformal Coated Chip



### CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

#### F72

Capacitance		6.3V (0J)	10V (1A)	16V (1C)
μF	Code			
220	227			M
470	477		M	
680	687		M	
1000	108	M/M(AH1)	M	
1500	158	M		

#### F75

Capacitance		Rated Voltage			
μF	Code	4V (0G)	6.3V (0J)	10V (1A)	16V (1C)
68	686				C
100	107				C
150	157			C	
220	227		C	C	R
330	337		C		
470	477	C	U	R/U	
680	687		R		
1000	108	R	R/U		
1500	158	R			
2200	228	R	M		

Released ratings

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

### RATINGS & PART NUMBER REFERENCE

#### F72

Part Number	Case Size	Capacitance (μF)	Rated Voltage (V)	DCL (μA)	DF @ 120Hz (%)	ESR @ 100kHz (Ω)	100kHz RMS Current (mA)			*1 ΔC/C (%)	MSL
							25°C	85°C	125°C		
6.3 Volt											
F720J108#MCAQ2	M	1000	6.3	63.0	30	0.14	1118	1006	447	±15	3
F720J108#MCAH1Q2	M	1000	6.3	63.0	30	0.075	1528	1375	611	±15	3
F720J158#MCAQ2	M	1500	6.3	95.0	45	0.14	1118	1006	447	±20	3
10 Volt											
F721A477#MCAQ2	M	470	10	47.0	30	0.14	1118	1006	447	±15	3
F721A687#MCAQ2	M	680	10	68.0	35	0.14	1118	1006	447	±20	3
F721A108#MCAQ2	M	1000	10	200	45	0.14	1118	1006	447	±20	3
16 Volt											
F721C227#MCAQ2	M	220	16	35.2	12	0.20	935	842	374	±20	3

#### F75

Part Number	Case Size	Capacitance (μF)	Rated Voltage (V)	DCL (μA)	DF @ 120Hz (%)	ESR @ 100kHz (Ω)	100kHz RMS Current (mA)			*1 ΔC/C (%)	MSL
							25°C	85°C	125°C		
4 Volt											
F750G477#CC	C	470	4	18.8	14	0.12	957	862	383	*	3
F750G108#RC	R	1000	4	40.0	24	0.12	1443	1299	577	*	3
F750G158#RC	R	1500	4	60.0	30	0.12	1443	1299	577	*	3
F750G228#RC	R	2200	4	88.0	45	0.07	1890	1701	756	*	3
6.3 Volt											
F750J227#CC	C	220	6.3	13.9	10	0.20	742	667	297	*	3
F750J337#CC	C	330	6.3	20.8	10	0.15	856	771	343	*	3
F750J477#UC	U	470	6.3	29.6	15	0.10	1049	944	420	*	3
F750J687#RC	R	680	6.3	42.8	18	0.12	1443	1299	577	*	3
F750J108#RC	R	1000	6.3	63.0	24	0.12	1443	1299	577	*	3
F750J108#UCAQ2	U	1000	6.3	126	40	0.15	856	771	343	±20	3
F750J228#MCAQ2	M	2200	6.3	139	60	0.08	1581	1423	632	±20	3
10 Volt											
F751A157#CC	C	150	10	15.0	10	0.22	707	636	283	*	3
F751A227#CC	C	220	10	22.0	10	0.20	742	667	297	*	3
F751A477#RC	R	470	10	47.0	14	0.12	1443	1299	577	*	3
F751A477#UCAQ2	U	470	10	94.0	30	0.15	856	771	343	±20	3
16 Volt											
F751C686#CC	C	68	16	10.9	10	0.22	707	636	283	*	3
F751C107#CC	C	100	16	16.0	10	0.22	707	636	283	*	3
F751C227#RC	R	220	16	35.2	10	0.20	1118	1006	447	*	3

\*1: ΔC/C Marked “\*”

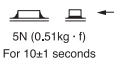
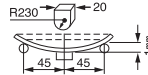
#: "M" for ±20% tolerance, "K" for ±10% tolerance.  
Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

Item	F72/F75 All Case (%)
Damp Heat	±10
Temperature cycles	±5
Resistance soldering heat	±5
Surge	±5
Endurance	±10

# F72/F75 Series

## Low Profile and High CV Conformal Coated Chip

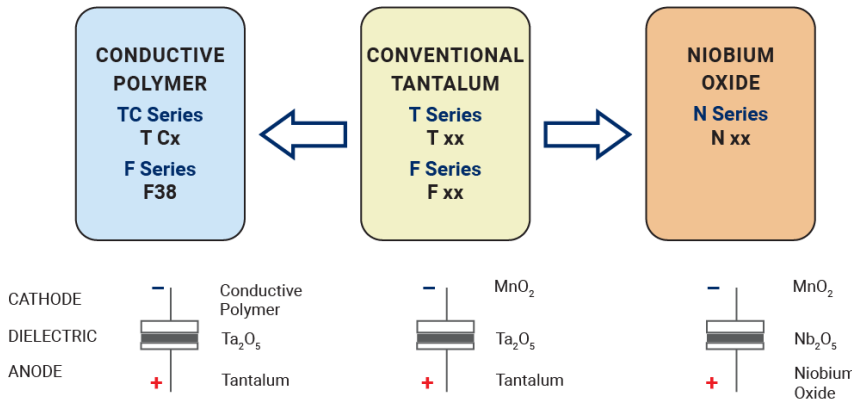
### QUALIFICATION TABLE

TEST	F72/F75 series (Temperature range -55°C to +125°C)	
	Condition	
<b>Damp Heat (Steady State)</b>	At 40°C, 90 to 95% R.H., 500 hours (No voltage applied) Capacitance Change ..... Refer to the table above (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less	
<b>Temperature Cycles</b>	At -55°C / +125°C, 30 minutes each, 5 cycles Capacitance Change ..... Refer to the table above (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less	
<b>Resistance to Soldering Heat</b>	10 seconds reflow at 260°C, 10 seconds immersion at 260°C. Capacitance Change ..... Refer to the table above (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less	
<b>Surge</b>	After application of surge voltage in series with a 33Ω resistor at the rate of 30 seconds ON, 30 seconds OFF, for 1000 successive test cycles at 85°C, capacitors shall meet the characteristic requirements in the table above. Capacitance Change ..... Refer to the table above (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less	
<b>Endurance</b>	After 2000 hours' application of rated voltage at 85°C, capacitors shall meet the characteristic requirements in the table above. Capacitance Change ..... Refer to the table above (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less	
<b>Shear Test</b>	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.	
<b>Terminal Strength</b>	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 capacitor, the pressure strength is applied with a specified jig at the center of substrate so that the substrate may bend by 1mm as illustrated. Then, there shall be found no remarkable abnormality on the capacitor terminals.	

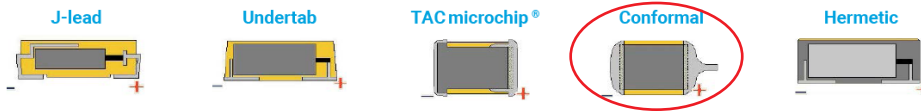
# F72/F75 Series

## Low Profile and High CV Conformal Coated Chip

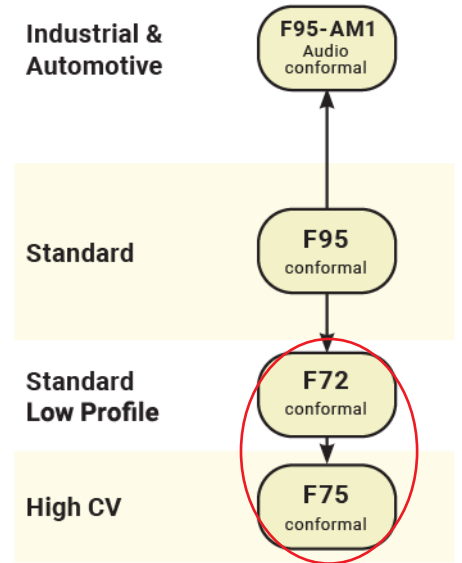
### SOLID ELECTROLYTIC CAPACITOR ROADMAP



### FIVE CAPACITOR CONSTRUCTION STYLES



### SERIES LINE UP : CONFORMAL Ta MnO<sub>2</sub>



## Looking for pricing, stock, or lifecycle information?

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