

F72/F75 Series



Low Profile and HiCV Conformal Coated Chip



FEATURES

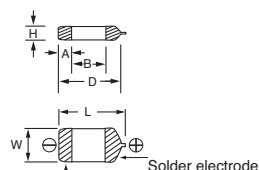
- Compliant to the RoHS2 directive 2011/65/EU
- SMD Conformal
- Small and low profile



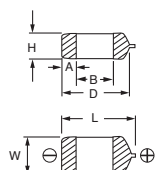
APPLICATIONS

- Smartphone
- Mobile phone
- Wireless module
- Hearing aid

F72



F75



CASE DIMENSIONS: millimeters (inches)

Code	L	W	H	A	B	D*
F72 Case Dimensions						
M	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)
R	7.20±0.30 (0.283±0.012)	6.00±0.30 (0.236±0.012)	1.20±0.30 (0.047±0.012)	1.30±0.40 (0.051±0.016)	3.80±0.60 (0.150±0.024)	6.20 (0.244)
F75 Case Dimensions						
C	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)
D	7.30±0.30 (0.287±0.012)	4.30±0.30 (0.136±0.012)	2.80±0.30 (0.110±0.012)	1.30±0.40 (0.051±0.016)	3.90±0.60 (0.153±0.024)	6.40 (0.252)
R	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	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

HOW TO ORDER

F72

Type

1A

Rated Voltage

107

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%

R

Case Size
See table above



Packaging
See Tape & Reel Packaging Section

AQ2

Single Facing Electrode

F75

Type

1C

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%

D

Case Size
See table above



Packaging
See Tape & Reel Packaging Section

AQ2

Single Facing 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



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CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

F72

Capacitance		Rated Voltage			
µF	Code	4V (0G)	6.3V (0J)	10V (1A)	16V (1C)
33	336				R
47	476			R	R
68	686		R	R	R
100	107	R	R	R	
150	157	R	R	R	
220	227	R	R	R	M
330	337	R	R	R*	M
470	477			M	
680	687			M	
1000	108		M	M	
1500	158		M		

Available Ratings

*Codes under development – subject to change

F75

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

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

RATINGS & PART NUMBER REFERENCE

F72

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DCL (µA)	DF (%) @ 120Hz	ESR (n) @ 100kHz	100kHz RMS Current (mA) 20°C	+1 ΔC/C (%)
4 Volt								
F720G107MRC	R	100	4	4.0	8	0.70	463	*
F720G157MRC	R	150	4	6.0	10	0.70	463	*
F720G227MRC	R	220	4	8.8	12	0.70	463	*
F720G337MRC	R	330	4	13.2	12	0.70	463	*
6.3 Volt								
F720J686MRC	R	68	6.3	4.3	6	0.75	447	*
F720J107MRC	R	100	6.3	6.3	8	0.70	463	*
F720J157MRC	R	150	6.3	9.5	10	0.70	463	*
F720J227MRC	R	220	6.3	13.9	12	0.70	463	*
F720J337MRC	R	330	6.3	20.8	12	0.70	463	*
F720J108MMCAQ2	M	1000	6.3	63.0	30	0.14	1118	±15
F720J158MMCAQ2	M	1500	6.3	95.0	45	0.14	1118	±20
10 Volt								
F721A476MRC	R	47	10	4.7	6	0.80	433	*
F721A686MRC	R	68	10	6.8	6	0.75	447	*
F721A107MRC	R	100	10	10.0	8	0.70	463	*
F721A157MRC	R	150	10	15.0	10	0.70	463	*
F721A227MRC	R	220	10	22.0	12	0.70	463	*
F721A477MMCAQ2	M	470	10	47.0	30	0.14	1118	±15
F721A687MMCAQ2	M	680	10	68.0	35	0.14	1118	±20
F721A108MMCAQ2	M	1000	10	200	45	0.14	1118	±20
16 Volt								
F721C336MRC	R	33	16	5.3	6	0.90	408	*
F721C476MRC	R	47	16	7.5	6	0.80	433	*
F721C686MRC	R	68	16	10.9	6	0.75	447	*
F721C227MMCAQ2	M	220	16	35.2	12	0.20	935	±20
F721C337MMCAQ2	M	330	16	52.8	45	0.20	935	±20

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

1: ΔC/C Marked ""

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

F75

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DCL (µA)	DF (%) @ 120Hz	ESR (n) @ 100kHz	100kHz RMS Current (mA) 20°C	+1 ΔC/C (%)
4 Volt								
F750G337MCC	C	330	4	13.2	10	0.15	856	*
F750G477MCC	C	470	4	18.8	14	0.12	957	*
F750G477MDC	D	470	4	18.8	14	0.12	1118	*
F750G687MDC	D	680	4	27.2	18	0.12	1118	*
F750G108MDC	D	1000	4	40.0	24	0.12	1118	*
F750G108MRC	R	1000	4	40.0	24	0.12	1443	*
F750G158MRC	R	1500	4	60.0	30	0.12	1443	*
F750G228MRC	R	2200	4	88.0	45	0.07	1890	*
6.3 Volt								
F750J227MCC	C	220	6.3	13.9	10	0.20	742	*
F750J337MCC	C	330	6.3	20.8	10	0.15	856	*
F750J337MDC	D	330	6.3	20.8	10	0.15	1000	*
F750J477MDC	D	470	6.3	29.6	14	0.12	1118	*
F750J477MUC	U	470	6.3	29.6	15	0.10	1049	*
F750J687MDC	D	680	6.3	42.8	18	0.12	1118	*
F750J687MRC	R	680	6.3	42.8	18	0.12	1443	*
F750J108MRC	R	1000	6.3	63.0	24	0.12	1443	*
10 Volt								
F751A157MCC	C	150	10	15.0	10	0.22	707	*
F751A227MCC	C	220	10	22.0	10	0.20	742	*
F751A227MDC	D	220	10	22.0	10	0.20	866	*
F751A337MDC	D	330	10	33.0	10	0.15	1000	*
F751A477MRC	R	470	10	47.0	14	0.12	1443	*
F751A477MUCAQ2	U	470	10	94.0	30	0.15	856	±20
16 Volt								
F751C686MCC	C	68	16	10.9	10	0.22	707	*
F751C107MCC	C	100	16	16.0	10	0.22	707	*
F751C157MDC	D	150	16	24.0	10	0.22	826	*
F751C227MRC	R	220	16	35.2	10	0.20	1118	*

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

1: ΔC/C Marked ""

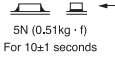
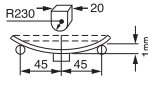
Item	F75 All Case (%)
Damp Heat	±10
Temperature cycles	±5
Resistance soldering heat	±5
Surge	±5
Endurance	±10

F72/F75 Series



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QUALIFICATION TABLE

Damp Heat (Steady State)	At 40°C, 90 to 95% R.H., 500 hours (No voltage applied) Capacitance Change Refer to page 72 (*1) Dissipation Factor Initial specified value or less Leakage Current Initial specified value or less
Temperature Cycles	At -55°C / +125°C, 30 minutes each, 5 cycles Capacitance Change Refer to page 72 (*1) Dissipation Factor Initial specified value or less Leakage Current Initial specified value or less
Resistance to Soldering Heat	10 seconds reflow at 260°C, 10 seconds immersion at 260°C. Capacitance Change Refer to page 72 (*1) Dissipation Factor Initial specified value or less Leakage Current Initial specified value or less
Surge	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 page 72 (*1) Dissipation Factor Initial specified value or less Leakage Current Initial specified value or less
Endurance	After 2000 hours' application of rated voltage at 85°C, capacitors shall meet the characteristic requirements in the table above. Capacitance Change Refer to page 72 (*1) 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. 
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 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. 

Mouser Electronics

Authorized Distributor

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AVX:

F720J107MRC	F721C686KRC	F751A477KRC	F721A107MRC	F721A108MMC	F750G337KCC	F721C336MRC
F750J687MDC	F721A227KRC	F721A476MRC	F751C107MCC	F750G477KDC	F720G227MRC	F751C227KRC
F720J158MMC	F721C686MRC	F750J687MRC	F750J477KUC	F751A227KCC	F721A687MMC	F720J227MRC
F750J227MCC	F750J227KCC	F751C227MRC	F720G157KRC	F750G687MDC	F721A686KRC	F750J337KDC
F720J227KRC	F750G108KRC	F750J477MDC	F751A157MCC	F750G477MCC	F720J337MRC	F720G227KRC
F750J337MCC	F750J337MDC	F750G108KDC	F751A477MRC	F720J337KRC	F750G108MRC	F750G337MCC
F720G157MRC	F751A227KDC	F751C157KDC	F720J108MMC	F721A227MRC	F720J686MRC	F721A477MMC
F750J108KRC	F720G337KRC	F720G107KRC	F721C476KRC	F751A337KDC	F751A337MDC	F750G108MDC
F751A227MDC	F720J686KRC	F750G158MRC	F750J477KDC	F721A107KRC	F750J477MUC	F721A476KRC
F721A686MRC	F720J107KRC	F750G158KRC	F750G228MRC	F720G107MRC	F751C157MDC	F750G477MDC
F751C107KCC	F720J157KRC	F751C686KCC	F721A157MRC	F750G228KRC	F750J337KCC	F750J687KDC
F721A157KRC	F720G337MRC	F750G687KDC	F751C686MCC	F721C336KRC	F751A227MCC	F750J687KRC
F751A157KCC	F720J157MRC	F720J158KMC	F750J108MRC	F750G477KCC	F721C476MRC	