F97-HT5 Series



High Temperature 150°C, Improved Reliability J-Lead



FEATURES

- Compliant to the RoHS2 directive 2011/65/EU
- Compliant to AEC-Q200
- Improved reliability FR=0.5%/1000hrs (twice better than standard)
- SMD J-lead



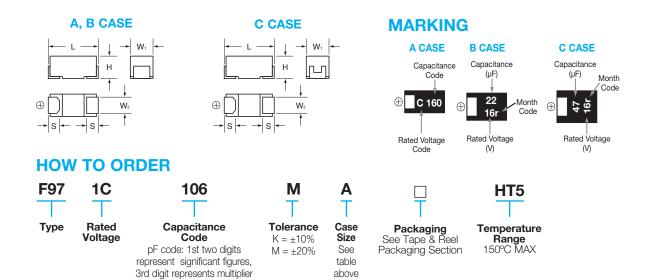


APPLICATIONS

- Automotive electronics (Engine ECU, Transmission ECU, ISG, Head lamp)
- Industrial equipment

CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	EIA Metric	L	W ₁	W ₂	Н	S	
Α	1206	3216-18	3.20 ± 0.20 (0.126 ± 0.008)	1.60 ± 0.20 (0.063 ± 0.008)	1.20 ± 0.10 (0.047 ± 0.004)	1.60 ± 0.20 (0.063 ± 0.008)	0.80 ± 0.20 (0.031 ± 0.008)	
В	1210	3528-21	3.50 ± 0.20 (0.126 ± 0.008)	2.80 ± 0.20 (0.110 ± 0.008)	2.20 ± 0.10 (0.087 ± 0.004)	1.90 ± 0.20 (0.075 ± 0.008)	0.80 ± 0.20 (0.031 ± 0.008)	
С	2312 6032-27		6.00 ± 0.20 (0.236 ± 0.008)	3.20 ± 0.20 (0.126 ± 0.008)	2.20 ± 0.10 (0.087 ± 0.004)	2.50 ± 0.20 (0.098 ± 0.008)	1.30 ± 0.20 (0.051 ± 0.008)	



TECHNICAL SPECIFICATIONS

(number of zeros to follow)

Category Temperature Range:	-55 to +150°C				
Rated Temperature:	+105°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 105°C				
	is not more than 0.1CV or 5µA, whichever is greater.				
	After 1 minute's application of derated voltage, leakage current at 150°C				
	is not more than 0.125CV or 6.3μA, whichever is greater.				
Capacitance Change By Temperature	+15% Max. at +150°C				
	+10% Max. at +105°C				
	-10% Max. at -55°C				

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CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Capac	citance	Rated Voltage		
μF	Code	10V (1A)	16V (1C)	
10	106		А	
15	156	Α		
22	226		В	
33	336			
47	476		C	

Released ratings

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

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	Leakage Current (μΑ)	DF @ 120Hz (%)	ESR @ 100kHz (Ω)	∆C/C (%)	MSL
	10 Volt							
F971A156MAAHT5	Α	15	10	1.5	10	3.0	*	3**
16 Volt								
F971C106MAAHT5	Α	10	16	1.6	8	3.5	*	3**
F971C226MBAHT5	В	22	16	3.5	8	1.9	*	3**
F971C476MCCHT5	С	47	16	7.5	10	1.1	*	3**

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

Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

QUALIFICATION TABLE

	F97-HT5 series (Temperature range -55°C to +150°C)						
TEST	Condition						
	At 85°C, 85% R.H., 1000 hours (No voltage applied)						
Damp Heat	Capacitance Change Refer to page 117 (*1)						
(Steady State)	Dissipation Factor Initial specified value or less						
	Leakage Current						
	After 1000 hour's application of rated voltage in series with a 33Ω resistor at 85°C, 85% R.H.,						
	capacitors meet the characteristics requirements table below.						
Load Humidity	Capacitance Change Refer to page 117 (*1)						
	Dissipation Factor						
	Leakage Current						
	At -55°C / +150°C, 30 minutes each, 1000 cycles						
Temperature Cycles	Capacitance Change Refer to page 117 (*1)						
remperature Oyoles	Dissipation Factor Initial specified value or less						
	Leakage Current Initial specified value or less						
	10 seconds reflow at 260°C, 5 seconds immersion at 260°C.						
Resistance to	Capacitance Change Refer to page 117 (*1)						
Soldering Heat	Dissipation Factor Initial specified value or less						
_	Leakage Current Initial specified value or less						
Solderability	After immersing capacitors completely into a solder pot at 245°C for 2 to 3 seconds,						
Coluctability	more than 3/4 of their electrode area shall remain covered with new solder.						
	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.						
Surge	Capacitance Change Refer to page 117 (*1)						
	Dissipation Factor Initial specified value or less						
	Leakage Current Initial specified value or less						
	After 2000 hours' application of rated voltage in series with a 3Ω resistor at 105°C, or derated voltage in series						
	with a 3Ω resistor at 150°C, capacitors shall meet the characteristic requirements in the table above.						
Endurance	Capacitance Change Refer to page 117 (*1)						
	Dissipation Factor Initial specified value or less						
	Leakage Current Initial specified value or less						
	After applying the pressure load of 17.7N for 60 seconds horizontally to the center of capacitor side						
Shear Test	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						
	Keeping a capacitor surface-mounted on a substrate upside down and supporting the substrate at						
Terminal Strength	both of the opposite bottom points 45mm apart from the center of capacitor, the pressure strength is						
Terrilliai Strengtii	applied with a specified jig at the center of the substrate so that substrate may bend by1mm as						
	illustrated. Then, there shall be found no remarkable abnormality on the capacitor terminals.						
Failure Rate	0.5% per 1000 hours at 105°C, V_R with $0.1\Omega/V$ series impedance,						
railure hate	60% confidence level.						

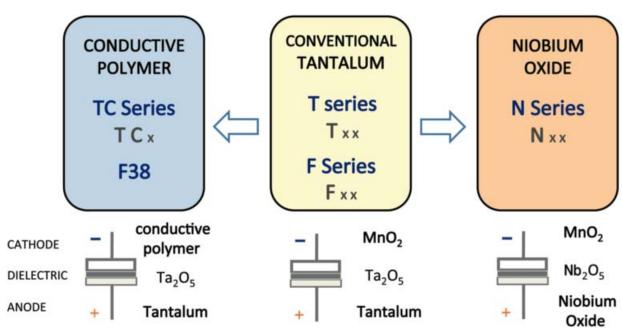
^{**} Dry pack is recommended for reduction of stress during soldering but you can choose an option without dry pack.

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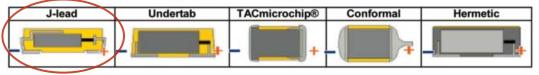


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AVX SOLID ELECTROLYTIC CAPACITOR ROADMAP



Five Capacitor Construction Styles



SERIES LINE UP: CONVENTIONAL SMD MnO₂

