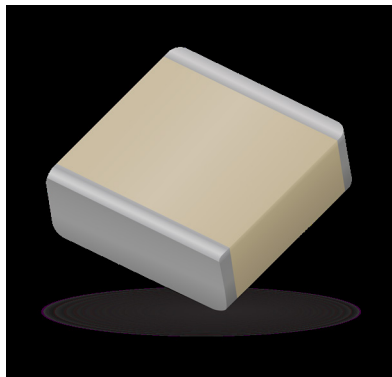


RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)

100E Series Porcelain High RF Power Multilayer Capacitors



GENERAL DESCRIPTION

AVX, the industry leader, offers new improved ESR/ESL performance for the 100 E Series RF Capacitors. This high Q multilayer capacitor is ultra-stable under high RF current and voltage applications. High density porcelain construction provides a rugged, hermetic package. AVX offers an encapsulation option for applications requiring extended protection against arc-over and corona.

FUNCTIONAL APPLICATIONS

- Bypass
- Coupling
- Tuning
- Impedance Matching
- DC Blocking

CIRCUIT APPLICATIONS

- HF/RF Power Amplifiers
- Transmitters
- Antenna Tuning
- Plasma Chambers
- Medical (MRI coils)

ENVIRONMENTAL CHARACTERISTICS

Thermal Shock	Mil-STD-202, Method 107, Condition A
Moisture Resistance	Mil-STD-202, Method 106
Low Voltage Humidity	Mil-STD-202, Method 103, condition A, with 1.5 VDC applied while subjected to an environment of 85°C with 85% relative humidity for 240 hours
Life Test	MIL-STD-202, Method 108, for 2000 hours, at 125°C. Voltage applied. 200% of WVDC for capacitors rated at 500 volts DC or less. 120% of WVDC for capacitors rated at 1250 volts DC or less. 100% of WVDC for capacitors rated above 1250 volts DC
Termination Styles	Available in various surface mount and leaded styles. See Mechanical Configurations
Terminal Strength	Terminations for chips and pellets withstand a pull of 10 lbs. min., 25 lbs. typical, for 5 seconds in direction perpendicular to the termination surface of the capacitor.

FEATURES

- Case E Size (.380" x .380")
- Capacitance Range 1pF to 5100pF
- Extended WVDC up to 7200 VDC
- Low ESR/ESL
- High Q
- High RF Power
- Ultra-Stable Performance
- High RF Current/Voltage
- Available with Encapsulation Option*

* For leaded styles only

PACKAGING OPTIONS



Tape & Reel



Tray
(96 pcs)



ELECTRICAL SPECIFICATIONS

Temperature Coefficient (TCC)	90 ± 30 PPM/°C
Capacitance Range	1 pF to 5100 pF
Operating Temperature	-55°C to +125°C*
Quality Factor	Greater than 10,000 (1 pF to 1000 pF) @ 1 MHz. Greater than 10,000 (1100 pF to 5100 pF) @ 1 KHz.
Insulation Resistance (IR)	1 pF to 5100 pF 10 ⁵ Megohms min. @ 25°C at 500 VDC 10 ⁴ Megohms min. @ 125°C at 500 VDC
Working Voltage (WVDC)	See Capacitance Values table
Dielectric Withstanding Voltage (DWV)	250% of WVDC for capacitors rated at 500 volts DC or less for 5 seconds. 150% of WVDC for capacitors rated at 1250 volts DC or less for 5 seconds. 120% of WVDC for capacitors rated above 1250 Volts DC for 5 seconds
Aging Effects	None
Piezoelectric Effects	None
Capacitance Drift	± (0.02% or 0.02 pF), whichever is greater
Retrace	Less than ±(0.02% or 0.02 pF), whichever is greater.



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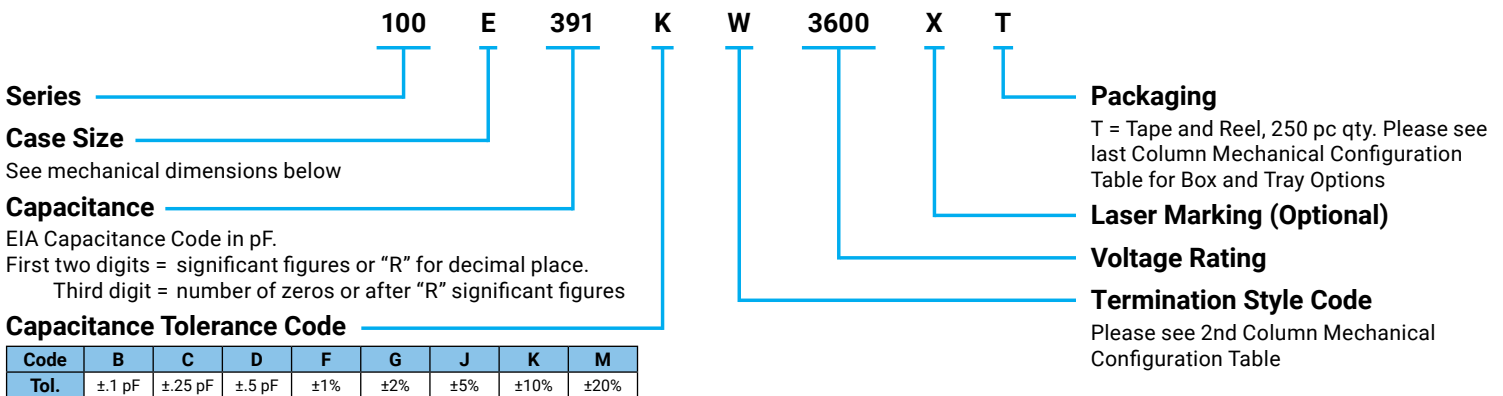
CAPACITANCE VALUES

Cap. Code	Cap. (pF)	Tol.	Rated WVDC		Cap. Code	Cap. (pF)	Tol.	Rated WVDC		Cap. Code	Cap. (pF)	Tol.	Rated WVDC		CAP. CODE	CAP. (pF)	TOL.	RATED WVDC				
			STD.	EXT.				STD.	EXT.				STD.	EXT.				STD.	EXT.			
1R0	1.0	B, C, D	3600	7200	5R6	5.6	B, C, D	3600	7200	470	47	F, G, J, K, M	3600	TAGE	391	390	F, G, J, K, M	3600	N/A			
1R1	1.1				6R2	6.2				510	51				431	430						
1R2	1.2				6R8	6.8				560	56				471	470						
1R3	1.3				7R5	7.5				620	62				511	510						
1R4	1.4				8R2	8.2				680	68				561	560						
1R5	1.5				9R1	9.1				750	75				621	620						
1R6	1.6				EXTENDED VOLTAGE	7200				EXTENDED VOLTAGE	100				10	EXTENDED				681	680	
1R7	1.7										110				11					751	750	
1R8	1.8										120				12					VOLT.	821	820
1R8	1.9										130				13						911	910
2R0	2.0	150	15	EXT.			102	1000														
2R1	2.1	160	16	5000			112	1100														
2R2	2.2	180	18				122	1200														
2R3	2.4	200	20				N/A	152	1500													
2R4	2.7	220	22					182	1800													
3R0	3.0	240	24					222	2200													
3R0	3.3	270	27		272	2700																
3R0	3.6	300	30		302	3000																
3R0	3.9	330	33		332	3300																
4R3	4.3	360	36		392	3900																
4R7	4.7	390	39		472	4700																
5R1	5.1	430	43	512	5100																	

VRMS = 0.707 X WVDC

• SPECIAL VALUES, TOLERANCES, MATCHING, AND CAPACITOR ASSEMBLIES ARE AVAILABLE. • AVX'S CUSTOM POWER CAPACITOR ASSEMBLY CATALOG, LISTS ASSEMBLY OPTIONS. • DIFFERENT WORKING VOLTAGES ARE AVAILABLE • ENCAPSULATION OPTION AVAILABLE. PLEASE CONSULT FACTORY.

HOW TO ORDER



The above part number refers to a 100 E Series (case size E) 390 pF capacitor, K tolerance (±10%), 3600 WVDC, with W termination (Tin / Lead, Solder Plated over Nickel Barrier), laser marking and Tape and Reel packaging.



The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)

100E Series Porcelain High RF Power Multilayer Capacitors



MECHANICAL CONFIGURATION

AVX Series & Case Size	AVX Term. Code	Case Size & Type	Outline W/T is a Termination Surface	Body Dimensions inches (mm)			Lead and Termination Dimensions and Material		Pkg Type & Qty	Pkg Code			
				Length (L)	Width (W)	Thickness (T)	Overlap (Y)	Materials					
100E	W	E Solder Plate		.380+.015-.010 (9.65+0.38-0.25)					Tin/Lead, Solder Plated over Nickel Barrier Termination	T&R, 250 pcs Tray, 96 pcs	T J96		
100E	P	E Pellet		.380+.040-.010 (9.65+1.02-0.25)						.040 (1.02) max.	Heavy Tin/Lead Coated, over Nickel Barrier Termination	T&R, 250 pcs Tray, 96 pcs	T J96
100E	T	E Solderable Nickel		.380+.015-.010 (9.65+0.38-0.25)							RoHS Compliant Tin Plated over Nickel Barrier Termination	T&R, 250 pcs Tray, 96 pcs	T J96
100E	MS	E Microstrip		.380+.035-.010 (9.65+0.89-0.25)	.380 ±.010 (9.65 ±0.25)	.170 (4.32) max.	N/A	High Purity Silver Leads L _L = .750 (19.05) min W _L = .350 ±.010 (8.89 ±0.25) T _L = .010 ±.005 (0.25 ±0.13) Leads are Attached with High Temperature Solder.	Tray, 16 or 32 pcs	J16 J32			
100E	AR	E Axial Ribbon							Tray, 16 or 32 pcs	J16 J32			
100E	AW	E Non-Mag Axial Wire							Box, 20 pcs	B20			
100E	RW	E Non-Mag Radial Wire		Tray, 16 or 64 pcs	J16 J64								

Custom lead styles and lengths are available, consult factory. All leads are high purity silver attached with high temperature solder and are **RoHS** compliant.



RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)

100E Series Porcelain High RF Power Multilayer Capacitors



MECHANICAL CONFIGURATION

AVX Series & Case Size	AVX Term. Code	Case Size & Type	Outline W/T is a Termination Surface	Body Dimensions inches (mm)			Lead and Termination Dimensions and Material		Pkg Type & Qty	Pkg Code	
				Length (L)	Width (W)	Thickness (T)	Overlap (Y)	Materials			
100E	WN	Non-Mag Solder Plate		.380+.015-.010 (9.65+0.38-0.25)	.380 ±.010 (9.65 ±0.25)	.170 (4.32) max.	.040 (1.02) max.	Tin/Lead, Solder Plated over Non-Magnetic Barrier Termination	T&R, 250 pcs Tray, 96 pcs	T J96	
100E	PN	Non-Mag Pellet		.380+.040-.010 (9.65+1.02-0.25)				Heavy Tin/Lead Coated, over Non-Magnetic Barrier Termination	T&R, 250 pcs Tray, 96 pcs	T J96	
100E	TN	Non-Mag Solderable Barrier		.380+.015-.010 (9.65+0.38-0.25)				RoHS Compliant Tin Plated over Non-Magnetic Barrier Termination	T&R, 250 pcs Tray, 96 pcs	T J96	
100E	MN	Non-Mag Microstrip		.380+.035-.010 (9.65+0.89-0.25)			N/A	N/A	High Purity Silver Leads $L_L = .750$ (19.05) min $W_L = .350 \pm .010$ (8.89 ±0.25) $T_L = .010 \pm .005$ (0.25 ±0.13) Leads are Attached with High Temperature Solder.	Tray, 16 or 32 pcs	J16 J32
100E	AN	Non-Mag Axial Ribbon							Silver-plated Copper Leads Dia. = .032 ±.002 (.813 ±.051) $L_L = 2.25$ (57.2) min.	Tray, 16 or 32 pcs	J16 J32
100E	BN	Non-Mag Axial Wire								Silver-plated Copper Leads Dia. = .032 ±.002 (.813 ±.051) $L_L = 1.0$ (25.4) min.	Box, 20 pcs
100E	RN	Non-Mag Radial Wire									Tray, 16 or 64 pcs

Custom lead styles and lengths are available; consult factory. All leads are high purity silver attached with high temperature solder and are **RoHS** compliant.



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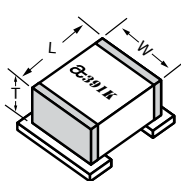
RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)

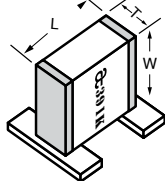
100E Series Porcelain High RF Power Multilayer Capacitors



SUGGESTED MOUNTING PAD DIMENSIONS



Horizontal
Electrode Orientation



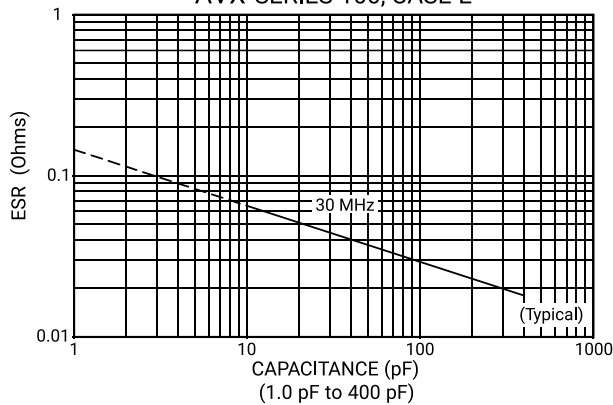
Vertical
Electrode Orientation

Mount Type	Case E				
	Pad Size	A Min.	B Min.	C Min.	D Min.
Vertical Mount	Normal	.185	.050	.325	.425
	High Density	.165	.030	.325	.385
Horizontal Mount	Normal	.405	.050	.325	.425
	High Density	.385	.030	.325	.385

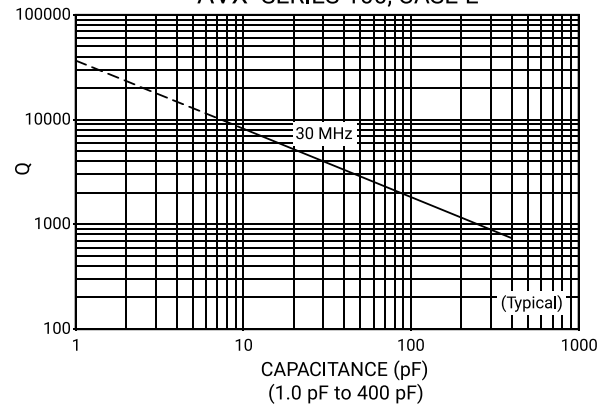
Dimensions are in inches.

PERFORMANCE DATA

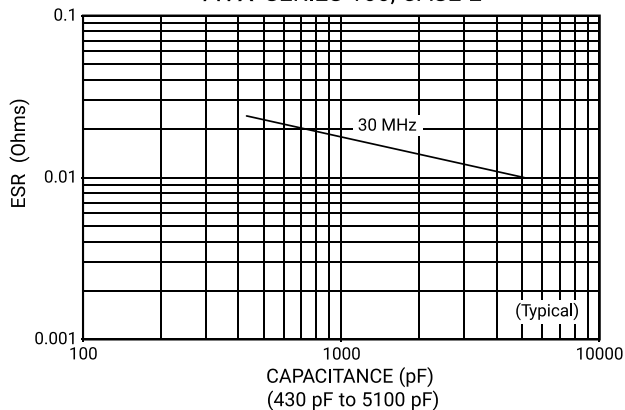
ESR VS. CAPACITANCE
AVX SERIES 100, CASE E



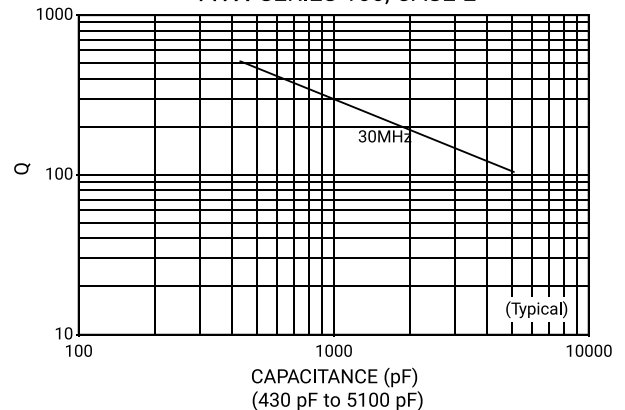
Q VS. CAPACITANCE
AVX SERIES 100, CASE E



ESR VS. CAPACITANCE
AVX SERIES 100, CASE E



Q VS. CAPACITANCE
AVX SERIES 100, CASE E



RF/Microwave Capacitors

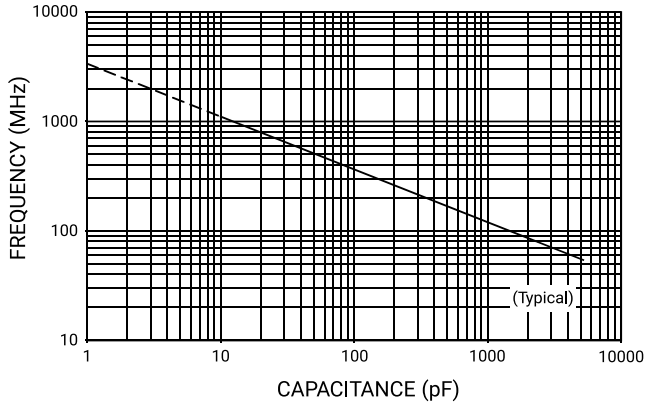
RF/Microwave Multilayer Capacitors (MLC)

100E Series Porcelain High RF Power Multilayer Capacitors

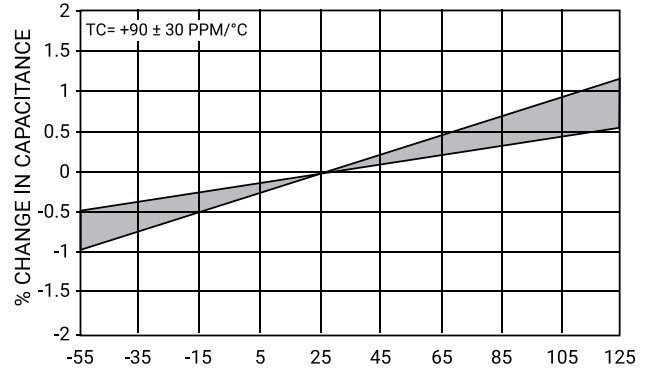


PERFORMANCE DATA

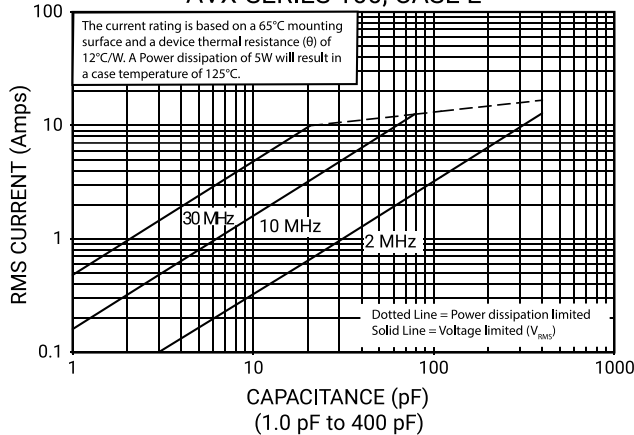
SERIES RESONANCE VS. CAPACITANCE
AVX SERIES 100, CASE E



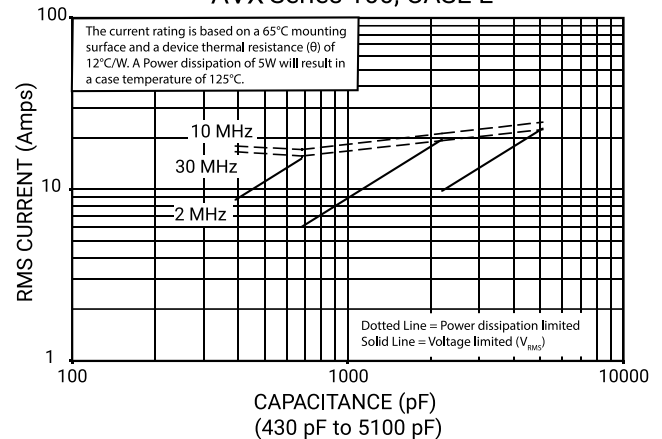
CAPACITANCE CHANGE VS. TEMPERATURE
AVX SERIES 100, CASE E



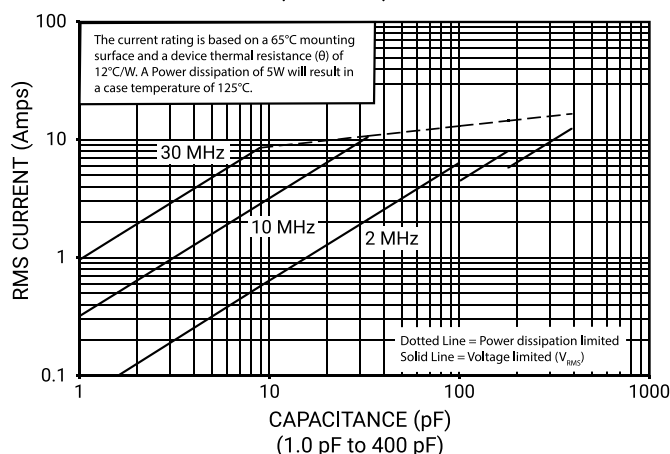
CURRENT RATING VS. CAPACITANCE
AVX SERIES 100, CASE E



CURRENT RATING VS. CAPACITANCE
AVX Series 100, CASE E



CURRENT RATING VS. CAPACITANCE
AVX SERIES 100, CASE E, EXTENDED VOLTAGE



单击下面可查看定价，库存，交付和生命周期等信息

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