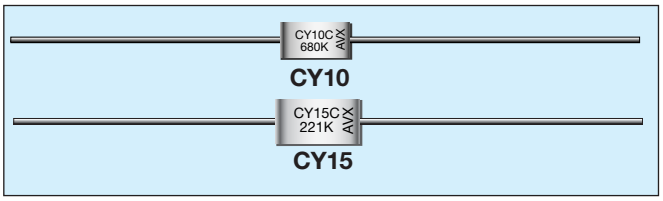
Glass Capacitors

CY10, 15 (QPL to MIL-C-11272/01/02)

APPLICATIONS

These extremely stable glass capacitors, AVX style CY, meet or exceed all requirements of MIL-C-11272. With glass dielectric, fused monolithic construction, and true glass-to-metal seals at the leads, they have very low losses and are virtually immune to severe environmental stresses.



PERFORMANCE CHARACTERISTICS

Tolerance: Available tolerances for each value of capacitance are shown in the ordering information table. For codes, refer to the Part Numbers paragraph.

Temperature Coefficient: +140 ±25 ppm/°C at 100kHz. TC will track and retrace to within ±5 ppm. Capacitance drift is less than 0.1% or 0.1pF, whichever is greater.

Voltage Coefficient: Zero.

Losses: Extremely low, and remain relatively low at elevated temperatures. Dissipation factor is not more than 0.001 at 1.0kHz and 25°C.

Life: After 2,000 hours at 125°C with 150% of rated voltage applied, capacitance change is less than 0.5% or 0.5pF, whichever is greater.

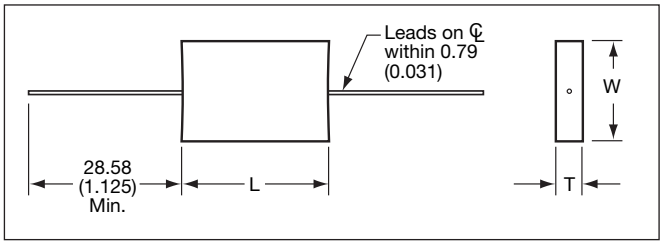
Insulation Resistance: Greater than 100,000 megohms at 25°C; greater than 10,000 megohms at 125°C.

Voltage/Temperature Rating: Voltage ratings are shown in the ordering information table. The operating temperature range is -55°C to +125°C with no derating required.

Moisture Resistance: Meets or exceeds all requirements of MIL-C-11272 and MIL-STD-202, Method 106.

Radiation Resistance: The unique materials and construction techniques involved with glass capacitors make them ideal for use in radiation environments. After a total dose of nearly 10^8 rads (H_2O) glass capacitors exhibit only a minor change in capacitance (≤.5%) and an 8% change in dissipation factor. Furthermore, glass capacitors can operate in fast neutron flux environments of 10^{15} N $cm^{-2}sec^{-1}$ and experience little or no damage in component parameters.

Additional performance details are given in the AVX "Performance Characteristics of Multilayer Glass Dielectric Capacitors" technical paper.



DIMENSIONS:

millimeters (inches)

Case Size	L	W	T	Lead Dia. +0.1 (+0.004) -0.03 (-0.001)	Weight (Grams)
CY10	8.74 ± 1.19 (0.344 ± 0.047)	4.37 ± .79 (0.172 ± 0.031)	1.98 ± .79 (0.078 ± 0.031)	.51 (0.020)	.25 – .50
CY15	11.91 ± 1.19 (0.469 ± 0.047)	6.76 ± .79 (0.266 ± 0.031)	2.77 ± 1.19 (0.109 ± 0.047)	.51 (0.020)	.75 – 1.25

Note: Standard leads are solder-coated Dumet.

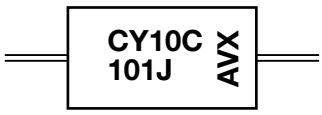
Glass Capacitors

Part Numbers and Ordering Information

HOW TO ORDER

CY	10	C	101	J
Style Glass Capacitor	**Case Size** 10 15	**Operating Temperature Range** -55°C to +125°C	**Capacitance Code** Capacitance Code is expressed in picofarads (pF). The first two digits represent significant figures and the third digit specifies the number of zeros to follow; i.e. 101 indicates 100 pF. For values below 10 pF, R = decimal point; i.e. 1R5 indicates 1.5 pF.	**Capacitance Tolerance** C = ±.25 pF D = ±.50 pF F = ±1% G = ±2% J = ±5% K = ±10% M = ±20%

MARKING



CY = Glass Capacitor
10 = Case Size
C = Operating Temperature Range
101 = Capacitance, Coded in pF
J = Tolerance
AVX = AVX Corporation

RATINGS & PART NUMBER REFERENCE (Standard Values)

Military Type Designation	Cap. (pF)	Tolerances Available	DC Working Voltage
	CY10		
CY10C0R5_	0.5	C	500
CY10C1R0_	1.0	C, D	500
CY10C1R5_	1.5	C, D	500
CY10C2R2_	2.2	C, D	500
CY10C2R7_	2.7	C, D	500
CY10C3R0_	3.0	C, D	500
CY10C3R3_	3.3	C, D	500
CY10C3R6_	3.6	C, D	500
CY10C3R9_	3.9	C, D	500
CY10C4R3_	4.3	C, D	500
CY10C4R7_	4.7	C, K	500
CY10C5R1_	5.1	C, J, K	500
CY10C5R6_	5.6	C, J, K	500
CY10C6R2_	6.2	C, J, K	500
CY10C6R8_	6.8	C, J, K	500
CY10C7R5_	7.5	C, J, K	500
CY10C8R2_	8.2	C, J, K	500
CY10C9R1_	9.1	C, J, K	500
CY10C100_	10	C, J, K, M	500
CY10C110_	11	C, J, K, M	500
CY10C120_	12	C, J, K, M	500
CY10C130_	13	C, G, J, K, M	500
CY10C150_	15	C, G, J, K, M	500
CY10C160_	16	C, G, J, K, M	500
CY10C180_	18	C, G, J, K, M	500
CY10C200_	20	C, G, J, K, M	500
CY10C220_	22	C, G, J, K, M	500
CY10C240_	24	C, G, J, K, M	500
CY10C270_	27	F, G, J, K, M	500
CY10C300_	30	F, G, J, K, M	500
CY10C330_	33	F, G, J, K, M	500
CY10C360_	36	F, G, J, K, M	500
CY10C390_	39	F, G, J, K, M	500
CY10C430_	43	F, G, J, K, M	500
CY10C470_	47	F, G, J, K, M	500
CY10C510_	51	F, G, J, K, M	500
CY10C560_	56	F, G, J, K, M	500
CY10C620_	62	F, G, J, K, M	500
CY10C680_	68	F, G, J, K, M	500
CY10C750_	75	F, G, J, K, M	500
CY10C820_	82	F, G, J, K, M	500
CY10C910_	91	F, G, J, K, M	500
CY10C101_	100	F, G, J, K, M	500
CY10C111_	110	F, G, J, K, M	500
CY10C121_	120	F, G, J, K, M	500
CY10C131_	130	F, G, J, K, M	500
CY10C151_	150	F, G, J, K, M	500
CY10C161_	160	F, G, J, K, M	500
CY10C181_	180	F, G, J, K, M	500
CY10C201_	200	F, G, J, K, M	500
CY10C221_	220	F, G, J, K, M	300
CY10C241_	240	F, G, J, K, M	300
CY10C271	270	F, G, J, K, M	300
CY10C301_	300	F, G, J, K, M	300

Add letter for tolerance code above lines.

Military Type Designation	Cap. (pF)	Tolerances Available	DC Working Voltage
	CY15		
CY15C221_	220	F, G, J, K, M	500
CY15C241_	240	F, G, J, K, M	500
CY15C271_	270	F, G, J, K, M	500
CY15C301_	300	F, G, J, K, M	500
CY15C331_	330	F, G, J, K, M	500
CY15C361_	360	F, G, J, K, M	500
CY15C391_	390	F, G, J, K, M	500
CY15C431_	430	F, G, J, K, M	500
CY15C471_	470	F, G, J, K, M	500
CY15C511_	510	F, G, J, K, M	500
CY15C561_	560	F, G, J, K, M	300
CY15C621_	620	F, G, J, K, M	300
CY15C681_	680	F, G, J, K, M	300
CY15C751_	750	F, G, J, K, M	300
CY15C821_	820	F, G, J, K, M	300
CY15C911_	910	F, G, J, K, M	300
CY15C102_	1,000	F, G, J, K, M	300
CY15C112_	1,100	F, G, J, K, M	300
CY15C122_	1,200	F, G, J, K, M	300

Add letter for tolerance code above lines.