Capacitor impedance measurements
John Chester 2009-05-31

					Impedance (Ohms)			Minimum Z		
C	**V**	**Type**	**Date**	**Status**	**200 kHz**	**1 Mhz**	**2 Mhz**	**Freq.**	**Z**	**Comment**
4.7	50	Nichicon UPW	2008	NEW	0.48	0.42	0.40	> 2 Mhz	0.40	
6.8	25	Sprague DT	1985	NOS	0.68	0.57	0.57	> 2 Mhz	0.57	
6.8	35	Sprague HT	1972	NOS	0.57	0.51	0.54	1 Mhz	0.51	
6.8	35	Sprague HT	1972	NOS	1.63	1.45	1.37	> 2 Mhz	1.37	
10	25	Sprague DT	1985	NOS	0.34	0.22	0.21	2 Mhz ?	0.21	
10	35	Kemet DT	1980	NOS	0.24	0.19	0.20	1 Mhz	0.19	
10	50	Nichicon UPW	2008	NEW	0.64	0.57	0.57	> 2 Mhz	0.57	
10	50	Nichicon UPW	2008	NEW	0.57	0.54	0.51	> 2 Mhz	0.51	
15	15	?? DT	1974	RFE	4.31	4.31	4.05	2 Mhz	4.05	440c record head coupling (C32)
22	25	Panasonic DT	1996	NOS	0.14	0.10	0.11	1 Mhz	0.10	
22	25	Kemet DT	2001	NOS	0.17	0.12	0.13	1.2 Mhz	0.12	
22	50	Nichicon UPW	2008	NEW	0.40	0.38	0.40	1.2 Mhz	0.38	
22	50	Nichicon UHE	2008	NEW	0.28	0.27	0.27	1.2 Mhz	0.27	
35	50	Mallory FP (can)	1974	RFE	1.45	1.37	1.29	2 Mhz	1.29	440c chassis can
47	6	?? DT	1974	RFE	0.36	0.34	0.36	1 Mhz	0.34	440c record amp C31
47	6	Sprague DT	1990	NOS	0.27	0.25	0.34	500 kHz	0.24	
50	50	Sprague 30D	1970	RFE	0.91	0.81	0.91	1 Mhz	0.81	440c repro amp C8
56	50	Nichicon UHE	2008	NEW	0.12	0.12	0.14	450 kHz	0.11	
100	25	Sprague 30D	1983	NOS	0.28	0.36	0.64	250 kHz	0.28	
100	50	Mallory FP (can)	1974	RFE	0.57	0.85	1.08	70 kHz	0.54	440c chassis can
120	10	Sprague HT	1978	NOS	0.09	0.20	0.36	200 kHz	0.09	
120	10	Sprague HT	1978	NOS	0.11	0.28	0.54	160 kHz	0.10	
120	16	Nichicon UPW	2008	NEW	0.20	0.19	0.20	600 kHz	0.19	
120	16	Nichicon UHE	2008	NEW	0.10	0.11	0.13	300 kHz	0.10	
120	63	Nichicon UPW	2008	NEW	0.05	0.07	0.10	200 kHz	0.05	
250	35	Mallory FP (can)	1974	RFE	0.72	0.68	0.64	2 Mhz	0.64	440c chassis can
470	35	Nichicon UHE	2008	NEW	0.03	0.06	0.11	160 kHz	0.03	
750	35	Mallory FP (can)	1974	RFE	0.21	0.27	0.38	200 kHz	0.21	440c chassis can

Type is manufacturer and series designation.
Where series designation is not known, DT = dipped tantalum, radial lead; HT = hermetic tantalum, axial lead

Status: NEW
NOS = New Old Stock
RFE = Removed From Equipment

Capacitance bridge says capacitance is within spec for all caps listed here.

Measurement method:
1) Connect function generator with 50 Ohm Zout to input of AC millivoltmeter. Set level to 0 dB.
2) Connect millvoltmeter clips close to body of DUT. Connect function generator clips further away from body of DUT.
3) Measure level in dB at frequencies listed above.
4) Vary frequency to find minimum reading, record frequency and reading.

Spreadsheet calculates impedance value from dB measurement.