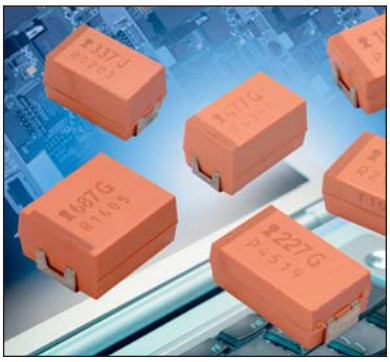
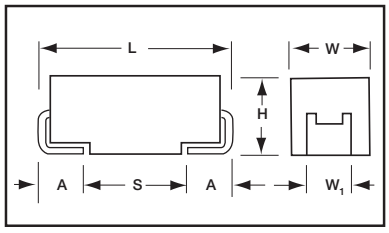
NBJ COTS-Plus

Niobium Oxide Capactor



NBJ, Niobium Oxide COTS+ Capacitors offer a non-burn solution for Military and Space applications. Niobium Oxide COTS+ Capacitors may be specified with failure rate grading to Weibull "B" or "C" and surge current tested in accordance with Mil-PRF-55365 options A or B.

NBJ are also available with Sn/Pb terminations.



CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	L±0.20 (0.008)	W+0.20 (0.008) –0.10 (0.004)	H+0.20 (0.008) –0.10 (0.004)	W_1 ±0.20 (0.008)	A+0.30 (0.012) –0.20 (0.008)	S Min.
A	3216	3.20 (0.126)	1.60 (0.063)	1.60 (0.063)	1.20 (0.047)	0.80 (0.031)	1.10 (0.043)
B	3528	3.50 (0.138)	2.80 (0.110)	1.90 (0.075)	2.20 (0.087)	0.80 (0.031)	1.40 (0.055)
C	6032	6.00 (0.236)	3.20 (0.126)	2.60 (0.102)	2.20 (0.087)	1.30 (0.051)	2.90 (0.114)
D	7343	7.30 (0.287)	4.30 (0.169)	2.90 (0.114)	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)
E	7343	7.30 (0.287)	4.30 (0.169)	4.10 (0.162)	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)
V	7361	7.30 (0.287)	6.10 (0.240)	3.45±0.30 (0.136±0.012)	3.10 (0.120)	1.40 (0.055)	1.80 (0.071)

W_1 dimension applies to the termination width for A dimensional area only.

HOW TO ORDER

NBJ	C	107	M	004	C	□	SB	O^	++
Type	**Case Size**	**Capacitance Code** pF code: 1st two digits represent significant figures 3rd digit represents multiplier (number of zeros to follow)	**Capacitance Tolerance** M = ±20%	**Voltage Code** 001 = 1.8Vdc 002 = 2.5Vdc 004 = 4Vdc 006 = 6Vdc 010 = 10Vdc	**ESR** C = Std ESR	**Packaging** B = Bulk R = 7" T&R S = 13" T&R W = Waffle	**Qualification/ Reliability** S = COTS+ B = 0.1% per 1000 hrs. C = 0.01% per 1000 hrs.	**Termination Finish** 08 = Tin/Lead 07 = 100% Tin	**Surge Test Option** 00 = None 23 = 10 cycles, +25°C 24 = 10 cycles, -55°C & +85°C

TECHNICAL SPECIFICATIONS

Technical Data:		All technical data relate to an ambient temperature of +25°C is not stated					
Capacitance Range:		4.7 µF to 1000 µF					
Capacitance Tolerance:		±20%					
Leakage Current DCL:		0.02CV					
Rated Voltage (V_R)	⩽+85°C:	1.8	2.5	4	6	10	
Category Voltage (V_C)	⩽+105°C:	1.2	1.7	2.7	4	7	
Surge Voltage (V_S)	⩽+85°C:	2.3	3.3	5.2	8	13	
	⩽+105°C:	1.6	2.2	3.4	5	8	
Temperature Range:		-55°C to +105°C					
Reliability:		0.5% per 1000 hours at 85°C, V_R, 0.1Ω/V series impedance, 60% confidence level					

NBJ COTS-Plus

Niobium Oxide Capactor

CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Capacitance	Rated Voltage DC (V_R) to 85°C / 0.66 DC to 105°C / 0.5 DC to 125°C				
µF	**1.8V**	**2.5V**	**4V**	**6**	**10V**
4.7				A	A
6.8				A	A
10				A	A/B
15			A	B	B
22		A	A/B	B	B/C
33		A/B	B	B/C	C
47	B	B	B/C	C	C
68	B	B/C	B/C	C	
100	B/C	B/C	C	C/D	
150	C	C	C/D	D	
220	C	C	D	D/E	
330	C	C/D	D	E	
470		D/E	D/E	V	
680		E	V		
1000		V			
1500					
2200					

Developmental Ratings - subject to change

LEAD-FREE

LEAD-FREE COMPATIBLE COMPONENT

RoHS COMPLIANT

NON-BURN NON-SMOKE

NBJ COTS-Plus

Niobium Oxide Capacitor

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage(V)	DCL (µA) Max.	DF % Max.	ESR Max. (Ω) @ 100kHz	100kHz Ripple Current Ratings (A)			100kHz Ripple Voltage Ratings (V)		
							25ºC	85ºC	105ºC	25ºC	85ºC	105ºC
NBJB476M001C□SB0^++	B	47	1.8	1.7	6	1.6	0.252	0.227	0.101	0.404	0.364	0.162
NBJB686M001C□SB0^++	B	68	1.8	2.5	6	1.5	0.261	0.235	0.104	0.391	0.352	0.156
NBJB107M001C□SB0^++	B	100	1.8	3.6	6	1.4	0.270	0.243	0.108	0.378	0.340	0.151
NBJC157M001C□SB0^++	C	150	1.8	5.4	8	0.4	0.574	0.517	0.230	0.230	0.207	0.092
NBJC107M001C□SB0^++	C	100	1.8	3.6	6	0.4	0.574	0.517	0.230	0.230	0.207	0.092
NBJC227M001C□SB0^++	C	220	1.8	8.0	8	0.4	0.574	0.517	0.230	0.230	0.207	0.092
NBJC337M001C□SB0^++	C	330	1.8	11.9	8	0.3	0.663	0.597	0.265	0.199	0.179	0.080
NBJA226M002C□SB0^++	A	22	2.5	1.1	6	1.9	0.218	0.196	0.087	0.414	0.372	0.165
NBJA336M002C□SB0^++	A	33	2.5	1.7	6	1.7	0.230	0.207	0.092	0.391	0.352	0.156
NBJB336M002C□SB0^++	B	33	2.5	1.7	6	1.7	0.245	0.220	0.098	0.416	0.375	0.167
NBJB476M002C□SB0^++	B	47	2.5	2.4	6	1.6	0.252	0.227	0.101	0.404	0.364	0.162
NBJB686M002C□SB0^++	B	68	2.5	3.4	6	1.5	0.261	0.235	0.104	0.391	0.352	0.156
NBJC686M002C□SB0^++	C	68	2.5	3.4	6	0.5	0.514	0.462	0.206	0.257	0.231	0.103
NBJB107M002C□SB0^++	B	100	2.5	5.0	6	1.4	0.270	0.243	0.108	0.378	0.340	0.151
NBJC107M002C□SB0^++	C	100	2.5	5.0	6	0.4	0.574	0.517	0.230	0.230	0.207	0.092
NBJC157M002C□SB0^++	C	150	2.5	7.5	6	0.4	0.574	0.517	0.230	0.230	0.207	0.092
NBJC227M002C□SB0^++	C	220	2.5	11.0	8	0.4	0.574	0.517	0.230	0.230	0.207	0.092
NBJC337M002C□SB0^++	C	330	2.5	16.5	10	0.3	0.663	0.597	0.265	0.199	0.179	0.080
NBJD337M002C□SB0^++	D	330	2.5	16.5	10	0.3	0.775	0.697	0.310	0.232	0.209	0.093
NBJD477M002C□SB0^++	D	470	2.5	23.5	10	0.3	0.775	0.697	0.310	0.232	0.209	0.093
NBJE477M002C□SB0^++	E	470	2.5	23.5	10	0.3	0.812	0.731	0.325	0.244	0.219	0.097
NBJE687M002C□SB0^++	E	680	2.5	34.0	12	0.3	0.812	0.731	0.325	0.244	0.219	0.097
NBJV108M002C□SB0^++	V	1000	2.5	50.0	18	0.3	1.000	0.900	0.400	0.300	0.270	0.120
NBJA156M004C□SB0^++	A	15	4	1.2	6	2	0.212	0.191	0.085	0.424	0.382	0.170
NBJA226M004C□SB0^++	A	22	4	1.8	6	1.9	0.218	0.196	0.087	0.414	0.372	0.165
NBJB226M004C□SB0^++	B	22	4	1.8	6	1.9	0.232	0.209	0.093	0.440	0.396	0.176
NBJB336M004C□SB0^++	B	33	4	2.6	6	1.7	0.245	0.220	0.098	0.416	0.375	0.167
NBJB476M004C□SB0^++	B	47	4	3.8	6	1.6	0.252	0.227	0.101	0.404	0.364	0.162
NBJC476M004C□SB0^++	C	47	4	3.8	6	0.5	0.514	0.462	0.206	0.257	0.231	0.103
NBJB686M004C□SB0^++	B	68	4	5.4	6	1.5	0.261	0.235	0.104	0.391	0.352	0.156
NBJC686M004C□SB0^++	C	68	4	5.4	6	0.5	0.514	0.462	0.206	0.257	0.231	0.103
NBJC107M004C□SB0^++	C	100	4	8.0	6	0.4	0.574	0.517	0.230	0.230	0.207	0.092
NBJC157M004C□SB0^++	C	150	4	12.0	6	0.4	0.574	0.517	0.230	0.230	0.207	0.092
NBJD157M004C□SB0^++	D	150	4	12.0	6	0.3	0.775	0.697	0.310	0.232	0.209	0.093
NBJD227M004C□SB0^++	D	220	4	17.6	8	0.4	0.671	0.604	0.268	0.268	0.241	0.107
NBJD337M004C□SB0^++	D	330	4	26.4	8	0.3	0.775	0.697	0.310	0.232	0.209	0.093
NBJD477M004C□SB0^++	D	470	4	37.6	12	0.3	0.775	0.697	0.310	0.232	0.209	0.093
NBJE477M004C□SB0^++	E	470	4	37.6	12	0.3	0.812	0.731	0.325	0.244	0.219	0.097
NBJV687M004C□SB0^++	V	680	4	54.4	14	0.3	1.000	0.900	0.400	0.300	0.270	0.120
NBJA475M006C□SB0^++	A	4.7	6	1.1	6	3.1	0.170	0.153	0.068	0.528	0.475	0.211
NBJA685M006C□SB0^++	A	6.8	6	1.1	6	2.6	0.186	0.167	0.074	0.484	0.435	0.193
NBJA106M006C□SB0^++	A	10	6	1.2	6	2.2	0.202	0.182	0.081	0.445	0.400	0.178
NBJB156M006C□SB0^++	B	15	6	1.8	6	2	0.226	0.203	0.090	0.452	0.406	0.181
NBJB226M006C□SB0^++	B	22	6	2.6	6	1.9	0.232	0.209	0.093	0.440	0.396	0.176
NBJB336M006C□SB0^++	B	33	6	4.0	6	1.7	0.245	0.220	0.098	0.416	0.375	0.167
NBJC336M006C□SB0^++	C	33	6	4.0	6	0.5	0.514	0.462	0.206	0.257	0.231	0.103
NBJC476M006C□SB0^++	C	47	6	5.7	6	0.5	0.514	0.462	0.206	0.257	0.231	0.103
NBJC686M006C□SB0^++	C	68	6	8.2	6	0.5	0.514	0.462	0.206	0.257	0.231	0.103
NBJC107M006C□SB0^++	C	100	6	12.0	8	0.4	0.574	0.517	0.230	0.230	0.207	0.092
NBJD107M006C□SB0^++	D	100	6	12.0	6	0.4	0.671	0.604	0.268	0.268	0.241	0.107
NBJD157M006C□SB0^++	D	150	6	18.0	6	0.4	0.671	0.604	0.268	0.268	0.241	0.107
NBJD227M006C□SB0^++	D	220	6	26.4	8	0.4	0.671	0.604	0.268	0.268	0.241	0.107
NBJE227M006C□SB0^++	E	220	6	26.4	12	0.4	0.704	0.633	0.281	0.281	0.253	0.113
NBJE337M006C□SB0^++	E	330	6	39.6	12	0.3	0.812	0.731	0.325	0.244	0.219	0.097
NBJV477M006C□SB0^++	V	470	6	56.4	12	0.3	1.000	0.900	0.400	0.300	0.270	0.120

All technical data relates to an ambient temperature of +25ºC. Capacitance and DF are measured at 120Hz, 0.5RMS with DC bias of 2.2V. DCL is measured at rated voltage after 5 minutes.

NOTE: AVX reserves the rights to supply higher voltage rating in the same case size, to the same reliability standards.

NBJ COTS-Plus

Niobium Oxide Capactor

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage(V)	DCL (µA) Max.	DF % Max.	ESR Max. (Ω) @ 100kHz	100kHz Ripple Current Ratings (A)			100kHz Ripple Voltage Ratings (V)		
							25ºC	85ºC	105ºC	25ºC	85ºC	105ºC
NBJA475M010C□SB0^++	A	4.7	10	1.0	6	3.1	0.170	0.153	0.068	0.528	0.475	0.211
NBJA685M010C□SB0^++	A	6.8	10	1.4	6	2.6	0.186	0.167	0.074	0.484	0.435	0.193
NBJA106M010C□SB0^++	A	10	10	2.0	6	2.2	0.202	0.182	0.081	0.445	0.400	0.178
NBJB106M010C□SB0^++	B	10	10	2.0	6	2.2	0.215	0.194	0.086	0.474	0.426	0.189
NBJB156M010C□SB0^++	B	15	10	3.0	6	2	0.226	0.203	0.090	0.452	0.406	0.181
NBJB226M010C□SB0^++	B	22	10	4.4	6	1.8	0.238	0.214	0.095	0.428	0.386	0.171
NBJC226M010C□SB0^++	C	22	10	4.4	6	0.5	0.514	0.462	0.206	0.257	0.231	0.103
NBJC336M010C□SB0^++	C	33	10	6.6	6	0.5	0.514	0.462	0.206	0.257	0.231	0.103
NBJC476M010C□SB0^++	C	47	10	9.4	6	0.4	0.574	0.517	0.230	0.230	0.207	0.092

All technical data relates to an ambient temperature of +25ºC. Capacitance and DF are measured at 120Hz, 0.5RMS with DC bias of 2.2V. DCL is measured at rated voltage after 5 minutes.

NOTE: AVX reserves the rights to supply higher voltage rating in the same case size, to the same reliability standards.