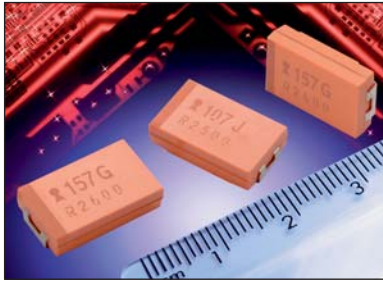


OxiCap® NOJ Series

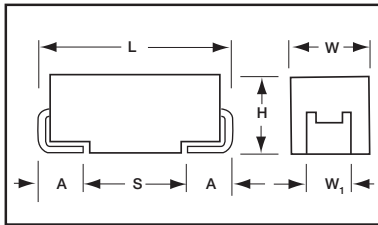


Low Profile



Seven additional case sizes are available in the NOJ range offering low profile solid niobium oxide capacitors. Designed for applications where maximum height of components above or below board are of prime consideration, this height of 1.0,

1.2, 1.5 and 2.0mm equates to that of a standard integrated circuit package after mounting. The S&T footprints are identical to the A&B case size parts and the W&Y footprints to C&D case size parts.



For part marking see page 122

CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	L±0.20 (0.008)	W+0.20 (0.008) -0.10 (0.004)	H Max	W ₁ ±0.20 (0.008)	A+0.30 (0.012) -0.20 (0.008)	S Min.
F	6032-20	6.00 (0.236)	3.20 (0.126)	2.00 (0.079)	2.20 (0.087)	1.30 (0.051)	2.90 (0.114)
P	2012-15	2.05 (0.081)	1.35 (0.053)	1.50 (0.059)	1.20 (0.047)	0.50 (0.020)	0.85 (0.033)
R	2012-12	2.05 (0.081)	1.30 (0.051)	1.20 (0.047)	1.20 (0.047)	0.50 (0.020)	0.85 (0.033)
S	3216-12	3.20 (0.126)	1.60 (0.063)	1.20 (0.047)	1.20 (0.047)	0.80 (0.031)	1.10 (0.043)
T	3528-12	3.50 (0.138)	2.80 (0.110)	1.20 (0.047)	2.20 (0.087)	0.80 (0.031)	1.40 (0.055)
W	6032-15	6.00 (0.236)	3.20 (0.126)	1.50 (0.059)	2.20 (0.087)	1.30 (0.051)	2.90 (0.114)
X	7343-15	7.30 (0.287)	4.30 (0.169)	1.50 (0.059)	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)
Y	7343-20	7.30 (0.287)	4.30 (0.169)	2.00 (0.079)	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)

W₁ dimension applies to the termination width for A dimensional area only.
Pad Stand-off is 0.1±0.1.

HOW TO ORDER

NOJ

Type

Y

Case Size

107

Capacitance Code
1st two digits represent significant figures, 3rd digit represents multiplier in pF

M

Capacitance Tolerance
M = ±20%

006

Rated DC Voltage
001 = 1.8Vdc
002 = 2.5Vdc
004 = 4Vdc
006 = 6.3Vdc
010 = 10Vdc

R

Packaging
R = Lead Free 7" Reel
S = Lead Free 13" Reel

WJ

Additional Characters

TECHNICAL SPECIFICATIONS

Technical Data:	All technical data relate to an ambient temperature of +25°C is not stated						
Capacitance Range:	2.2 µF to 470 µF						
Capacitance Tolerance:	±20%						
Leakage Current DCL:	0.02CV						
Rated Voltage DC (V _R)	≤+85°C:	1.8	2.5	4	6.3	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 Meets requirements of AEC-Q200						



OxiCap® NOJ Series



Low Profile

CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Rated Voltage DC (V _R) to 85°C / 0.66 DC to 105°C				
µF	Code	1.8V (x)	2.5V (e)	4V (G)	6.3V (J)	10V (A)
1.0	105					
1.5	155					
2.2	225					P
3.3	335					P
4.7	475				P/S	T
6.8	685			P/S	P/S/T	T
10	106		P/S	P/S/T	P/T	T
15	156	P/S	P/S/T	P/T		
22	226	P/S/T	P/T	T	T	
33	336	T	T	T	W	
47	476	T	T	W	W	
68	686		W	W	X/Y	
100	107	W	W	W/X	F/Y	
150	157		X	Y	F/Y	
220	227	X	Y	F/Y	Y	
330	337	Y	Y	Y		
470	477	Y				

Engineering samples - please contact manufacturer

*Codes under development - subject to change.

Note: Voltage ratings are minimum values. AVX reserves the right to supply higher ratings in the same case size, to the same reliability standards.



LEAD-FREE

LEAD-FREE COMPATIBLE
COMPONENT



RoHS
COMPLIANT



NON-BURN
NON-SMOKE

Low Profile

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)		
							25°C	85°C	105°C	25°C	85°C	105°C
1.8 Volt @ 85°C (1.2 Volt @ 105°C)												
NOJP156M001#	P	15	1.8	1.0	10	4.1	0.133	0.119	0.053	0.543	0.489	0.217
NOJS156M001#	S	15	1.8	1.0	6	2.0	0.197	0.178	0.079	0.395	0.335	0.158
NOJP226M001#	P	22	1.8	1.0	10	3.8	0.138	0.124	0.055	0.523	0.471	0.209
NOJS226M001#	S	22	1.8	1.0	8	1.9	0.203	0.182	0.081	0.385	0.346	0.154
NOJT226M001#	T	22	1.8	1.0	6	1.8	0.231	0.208	0.092	0.416	0.374	0.166
NOJT336M001#	T	33	1.8	1.2	6	1.7	0.238	0.214	0.095	0.404	0.364	0.162
NOJT476M001#	T	47	1.8	1.7	10	1.6	0.231	0.208	0.092	0.416	0.374	0.166
NOJW107M001#	W	100	1.8	3.6	6	0.15	0.849	0.764	0.339	0.127	0.115	0.051
NOJX227M001#	X	220	1.8	8.0	8	0.4	0.548	0.493	0.219	0.219	0.197	0.088
NOJY337M001#	Y	330	1.8	11.9	8	0.3	0.707	0.636	0.283	0.212	0.191	0.085
NOJY477M001#	Y	470	1.8	16.9	8	0.3	0.707	0.636	0.283	0.212	0.191	0.085
2.5 Volt @ 85°C (1.7 Volt @ 105°C)												
NOJP106M002#	P	10	2.5	1.0	6	4.5	0.126	0.114	0.051	0.569	0.512	0.228
NOJS106M002#	S	10	2.5	1.0	6	2.2	0.188	0.169	0.075	0.414	0.373	0.166
NOJP156M002#	P	15	2.5	1.0	6	4.0	0.134	0.121	0.054	0.537	0.483	0.215
NOJS156M002#	S	15	2.5	1.0	8	2.0	0.197	0.178	0.079	0.395	0.355	0.158
NOJT156M002#	T	15	2.5	1.0	6	2.0	0.219	0.197	0.088	0.438	0.394	0.175
NOJP226M002#	P	22	2.5	1.1	10	3.8	0.138	0.124	0.055	0.523	0.471	0.209
NOJT226M002#	T	22	2.5	1.1	6	1.9	0.225	0.202	0.090	0.427	0.384	0.171
NOJT336M002#	T	33	2.5	1.7	6	1.7	0.238	0.214	0.095	0.404	0.364	0.162
NOJT476M002#	T	47	2.5	2.4	10	1.6	0.225	0.202	0.090	0.427	0.384	0.171
NOJW686M002#	W	68	2.5	3.4	6	0.4	0.520	0.468	0.208	0.208	0.187	0.083
NOJW107M002#	W	100	2.5	5.0	6	0.4	0.520	0.468	0.208	0.208	0.187	0.083
NOJX157M002#	X	150	2.5	7.5	6	0.4	0.548	0.493	0.219	0.219	0.197	0.088
NOJY227M002#	Y	220	2.5	11.0	8	0.4	0.612	0.551	0.245	0.245	0.220	0.098
NOJY337M002#	Y	330	2.5	16.5	10	0.3	0.707	0.636	0.283	0.212	0.191	0.085
4 Volt @ 85°C (2.7 Volt @ 105°C)												
NOJP685M004#	P	6.8	4	1.0	6	5.3	0.117	0.105	0.047	0.618	0.556	0.247
NOJS685M004#	S	6.8	4	1.0	6	2.6	0.173	0.156	0.069	0.450	0.405	0.180
NOJP106M004#	P	10	4	1.0	16	4.5	0.126	0.114	0.051	0.569	0.512	0.228
NOJS106M004#	S	10	4	1.0	8	2.2	0.188	0.169	0.075	0.414	0.373	0.166
NOJT106M004#	T	10	4	1.0	6	2.2	0.209	0.188	0.084	0.460	0.414	0.184
NOJP156M004#	P	15	4	1.2	10	4.1	0.133	0.119	0.053	0.543	0.489	0.217
NOJT156M004#	T	15	4	1.2	6	2.0	0.219	0.197	0.088	0.438	0.394	0.175
NOJT226M004#	T	22	4	1.8	6	1.8	0.231	0.208	0.092	0.416	0.374	0.166
NOJT336M004#	T	33	4	2.6	14	2.0	0.219	0.197	0.088	0.438	0.394	0.175
NOJW476M004#	W	47	4	3.8	6	0.5	0.465	0.418	0.186	0.232	0.209	0.093
NOJW686M004#	W	68	4	5.4	6	0.4	0.520	0.468	0.208	0.208	0.187	0.083
NOJW107M004#	W	100	4	8.0	8	0.4	0.520	0.468	0.208	0.208	0.187	0.083
NOJX107M004#	X	100	4	8.0	6	0.4	0.548	0.493	0.219	0.219	0.197	0.088
NOJY157M004#	Y	150	4	12.0	6	0.4	0.612	0.551	0.245	0.245	0.220	0.098
NOJF227M004#	F	220	4	17.6	10	0.4	0.548	0.493	0.219	0.219	0.197	0.088
NOJY227M004#	Y	220	4	17.6	10	0.4	0.612	0.551	0.245	0.245	0.220	0.098
NOJY337M004#	Y	330	4	26.4	12	0.3	0.612	0.551	0.245	0.245	0.220	0.098
6.3 Volt @ 85°C (4 Volt @ 105°C)												
NOJP475M006#	P	4.7	6.3	1.0	6	6.1	0.109	0.098	0.043	0.663	0.596	0.265
NOJS475M006#	S	4.7	6.3	1.0	6	3.2	0.156	0.141	0.062	0.500	0.450	0.200
NOJP685M006#	P	6.8	6.3	1.0	8	5.2	0.118	0.106	0.047	0.612	0.551	0.245
NOJS685M006#	S	6.8	6.3	1.0	8	2.7	0.170	0.153	0.068	0.459	0.413	0.184
NOJT685M006#	T	6.8	6.3	1.0	6	2.6	0.192	0.173	0.077	0.500	0.450	0.200
NOJP106M006#	P	10	6.3	1.2	10	4.5	0.126	0.114	0.051	0.569	0.512	0.228
NOJT106M006#	T	10	6.3	1.2	6	2.2	0.209	0.188	0.084	0.460	0.414	0.184
NOJT226M006#	T	22	6.3	2.6	8	1.8	0.209	0.188	0.084	0.460	0.414	0.184
NOJW336M006#	W	33	6.3	4.0	6	0.5	0.465	0.418	0.186	0.232	0.209	0.093
NOJW476M006#	W	47	6.3	5.7	6	0.5	0.465	0.418	0.186	0.232	0.209	0.093
NOJX686M006#	X	68	6.3	8.2	6	0.5	0.490	0.441	0.196	0.245	0.220	0.098
NOJY686M006#	Y	68	6.3	8.2	6	0.5	0.548	0.493	0.219	0.274	0.246	0.110
NOJF107M006#	F	100	6.3	12	8	0.4	0.548	0.493	0.219	0.219	0.197	0.088
NOJY107M006#	Y	100	6.3	12.0	6	0.4	0.612	0.551	0.245	0.245	0.220	0.098
NOJF157M006#	F	150	6.3	18.0	8	0.4	0.548	0.493	0.219	0.219	0.197	0.088
NOJY157M006#	Y	150	6.3	18.0	6	0.4	0.612	0.551	0.245	0.245	0.220	0.098
NOJY227M006#	Y	220	6.3	26.4	10	0.4	0.612	0.551	0.245	0.245	0.220	0.098
10 Volt @ 85°C (7 Volt @ 105°C)												
NOJP225M010#	P	2.2	10	1.0	8	8.3	0.093	0.084	0.037	0.773	0.696	0.309
NOJP335M010#	P	3.3	10	1.0	8	7	0.101	0.091	0.041	0.710	0.639	0.284
NOJT475M010#	T	4.7	10	1.0	6	3.1	0.176	0.158	0.070	0.546	0.491	0.218
NOJT685M010#	T	6.8	10	1.4	6	2.6	0.192	0.173	0.077	0.500	0.450	0.200
NOJT106M010#	T	10	10	2.0	6	2.2	0.209	0.188	0.084	0.460	0.414	0.184

Standard Plating – Insert R for 7" reel and S for 13" reel
 # **Gold Plating** – Insert A for 7" reel and B for 13" reel
 # **Tin Lead Plating** – Insert H for 7" reel and K for 13" reel

NOTE: AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes. MSL level: See page 112 (6. Moisture Sensitivity Level) or packaging and reel label.)