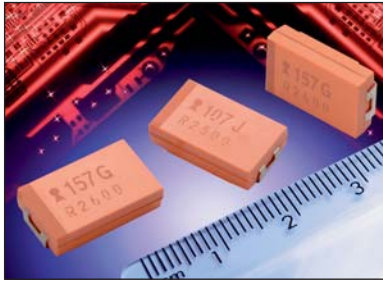


# OxiCap® NOJ Series



## Low Profile

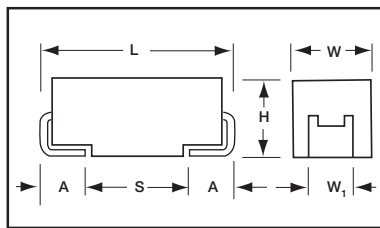


- Non-burn safe technology
- Reliability level: 0.5%/1000 hrs.
- CV range: 2.2-470µF / 1.8-10V
- 8 case sizes in low profile available
- IBM global approval received in 2004
- Electra Award received in 2005



Electra Award  
2005

### CASE DIMENSIONS: millimeters (inches)



For part marking see page 123

Code	EIA Code	L±0.20 (0.008)	W±0.20 (0.008) -0.10 (0.004)	H Max	W <sub>1</sub> ±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)

W<sub>1</sub> 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**  
See table above

**107**



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

**M**



**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**



**Specification Suffix**  
WJ = Standard Suffix

**—**



**Additional characters may be added for special requirements**  
V = Dry pack Option (selected codes only) with exception of X, Y cases

### 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 <sub>R</sub> )	≤ +85°C:	1.8	2.5	4	6.3	10	
Category Voltage (V <sub>C</sub> )	≤ +105°C:	1.2	1.7	2.7	4	7	
Surge Voltage (V <sub>S</sub> )	≤ +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 <sub>R</sub> , 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 <sub>R</sub> ) 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				



LEAD-FREE

LEAD-FREE COMPATIBLE  
COMPONENT



RoHS  
COMPLIANT



NON-BURN  
NON-SMOKE

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.

## Low Profile

### RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Cap (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
<b>1.8 Volt @ 85°C (1.2 Volt @ 105°C)</b>												
NOJP156M001#WJ	P	15	1.8	1.0	10	4.1	0.133	0.119	0.053	0.543	0.489	0.217
NOJS156M001#WJ	S	15	1.8	1.0	6	2.0	0.197	0.178	0.079	0.395	0.335	0.158
NOJP226M001#WJ	P	22	1.8	1.0	10	3.8	0.138	0.124	0.055	0.523	0.471	0.209
NOJS226M001#WJ	S	22	1.8	1.0	8	1.9	0.203	0.182	0.081	0.385	0.346	0.154
NOJT226M001#WJ	T	22	1.8	1.0	6	1.8	0.231	0.208	0.092	0.416	0.374	0.166
NOJT336M001#WJ	T	33	1.8	1.2	6	1.7	0.238	0.214	0.095	0.404	0.364	0.162
NOJT476M001#WJ	T	47	1.8	1.7	10	1.6	0.231	0.208	0.092	0.416	0.374	0.166
NOJW107M001#WJ	W	100	1.8	3.6	6	0.4	0.520	0.468	0.208	0.208	0.187	0.083
NOJX227M001#WJ	X	220	1.8	8.0	8	0.4	0.548	0.493	0.219	0.219	0.197	0.088
NOJY337M001#WJ	Y	330	1.8	11.9	8	0.3	0.707	0.636	0.283	0.212	0.191	0.085
NOJY477M001#WJ	Y	470	1.8	16.9	8	0.3	0.707	0.636	0.283	0.212	0.191	0.085
<b>2.5 Volt @ 85°C (1.7 Volt @ 105°C)</b>												
NOJP106M002#WJ	P	10	2.5	1.0	6	4.5	0.126	0.114	0.051	0.569	0.512	0.228
NOJS106M002#WJ	S	10	2.5	1.0	6	2.2	0.188	0.169	0.075	0.414	0.373	0.166
NOJP156M002#WJ	P	15	2.5	1.0	6	4.0	0.134	0.121	0.054	0.537	0.483	0.215
NOJS156M002#WJ	S	15	2.5	1.0	8	2.0	0.197	0.178	0.079	0.395	0.355	0.158
NOJT156M002#WJ	T	15	2.5	1.0	6	2.0	0.219	0.197	0.088	0.438	0.394	0.175
NOJP226M002#WJ	P	22	2.5	1.1	10	3.8	0.138	0.124	0.055	0.523	0.471	0.209
NOJT226M002#WJ	T	22	2.5	1.1	6	1.9	0.225	0.202	0.090	0.427	0.384	0.171
NOJT336M002#WJ	T	33	2.5	1.7	6	1.7	0.238	0.214	0.095	0.404	0.364	0.162
NOJT476M002#WJ	T	47	2.5	2.4	10	1.6	0.225	0.202	0.090	0.427	0.384	0.171
NOJW686M002#WJ	W	68	2.5	3.4	6	0.4	0.520	0.468	0.208	0.208	0.187	0.083
NOJW107M002#WJ	W	100	2.5	5.0	6	0.4	0.520	0.468	0.208	0.208	0.187	0.083
NOJX157M002#WJ	X	150	2.5	7.5	6	0.4	0.548	0.493	0.219	0.219	0.197	0.088
NOJY227M002#WJ	Y	220	2.5	11.0	8	0.4	0.612	0.551	0.245	0.245	0.220	0.098
NOJY337M002#WJ	Y	330	2.5	16.5	10	0.3	0.707	0.636	0.283	0.212	0.191	0.085
<b>4 Volt @ 85°C (2.7 Volt @ 105°C)</b>												
NOJP685M004#WJ	P	6.8	4	1.0	6	5.3	0.117	0.105	0.047	0.618	0.556	0.247
NOJS685M004#WJ	S	6.8	4	1.0	6	2.6	0.173	0.156	0.069	0.450	0.405	0.180
NOJP106M004#WJ	P	10	4	1.0	16	4.5	0.126	0.114	0.051	0.569	0.512	0.228
NOJS106M004#WJ	S	10	4	1.0	8	2.2	0.188	0.169	0.075	0.414	0.373	0.166
NOJT106M004#WJ	T	10	4	1.0	6	2.2	0.209	0.188	0.084	0.460	0.414	0.184
NOJP156M004#WJ	P	15	4	1.2	10	4.1	0.133	0.119	0.053	0.543	0.489	0.217
NOJT156M004#WJ	T	15	4	1.2	6	2.0	0.219	0.197	0.088	0.438	0.394	0.175
NOJT226M004#WJ	T	22	4	1.8	6	1.8	0.231	0.208	0.092	0.416	0.374	0.166
NOJT336M004#WJ	T	33	4	2.6	14	2.0	0.219	0.197	0.088	0.438	0.394	0.175
NOJW476M004#WJ	W	47	4	3.8	6	0.5	0.465	0.418	0.186	0.232	0.209	0.093
NOJW686M004#WJ	W	68	4	5.4	6	0.4	0.520	0.468	0.208	0.208	0.187	0.083
NOJW107M004#WJ	W	100	4	8.0	8	0.4	0.520	0.468	0.208	0.208	0.187	0.083
NOJX107M004#WJ	X	100	4	8.0	6	0.4	0.548	0.493	0.219	0.219	0.197	0.088
NOJY157M004#WJ	Y	150	4	12.0	6	0.4	0.612	0.551	0.245	0.245	0.220	0.098
NOJF227M004#WJ	F	220	4	17.6	10	0.4	0.548	0.493	0.219	0.219	0.197	0.088
NOJY227M004#WJ	Y	220	4	17.6	10	0.4	0.612	0.551	0.245	0.245	0.220	0.098
NOJY337M004#WJ	Y	330	4	26.4	12	0.3	0.612	0.551	0.245	0.245	0.220	0.098
<b>6.3 Volt @ 85°C (4 Volt @ 105°C)</b>												
NOJP475M006#WJ	P	4.7	6.3	1.0	6	6.1	0.109	0.098	0.043	0.663	0.596	0.265
NOJS475M006#WJ	S	4.7	6.3	1.0	6	3.2	0.156	0.141	0.062	0.500	0.450	0.200
NOJP685M006#WJ	P	6.8	6.3	1.0	8	5.2	0.118	0.106	0.047	0.612	0.551	0.245
NOJS685M006#WJ	S	6.8	6.3	1.0	8	2.7	0.170	0.153	0.068	0.459	0.413	0.184
NOJT685M006#WJ	T	6.8	6.3	1.0	6	2.6	0.192	0.173	0.077	0.500	0.450	0.200
NOJP106M006#WJ	P	10	6.3	1.2	10	4.5	0.126	0.114	0.051	0.569	0.512	0.228
NOJT106M006#WJ	T	10	6.3	1.2	6	2.2	0.209	0.188	0.084	0.460	0.414	0.184
NOJT226M006#WJ	T	22	6.3	2.6	8	1.8	0.209	0.188	0.084	0.460	0.414	0.184
NOJW336M006#WJ	W	33	6.3	4.0	6	0.5	0.465	0.418	0.186	0.232	0.209	0.093
NOJW476M006#WJ	W	47	6.3	5.7	6	0.5	0.465	0.418	0.186	0.232	0.209	0.093
NOJX686M006#WJ	X	68	6.3	8.2	6	0.5	0.490	0.441	0.196	0.245	0.220	0.098
NOJY686M006#WJ	Y	68	6.3	8.2	6	0.5	0.548	0.493	0.219	0.274	0.246	0.110
NOJF107M006#WJ	F	100	6.3	12	8	0.4	0.548	0.493	0.219	0.219	0.197	0.088
NOJY107M006#WJ	Y	100	6.3	12.0	6	0.4	0.612	0.551	0.245	0.245	0.220	0.098
NOJF157M006#WJ	F	150	6.3	18.0	8	0.4	0.548	0.493	0.219	0.219	0.197	0.088
NOJY157M006#WJ	Y	150	6.3	18.0	6	0.4	0.612	0.551	0.245	0.245	0.220	0.098
NOJY227M006#WJ	Y	220	6.3	26.4	10	0.4	0.612	0.551	0.245	0.245	0.220	0.098
<b>10 Volt @ 85°C (7 Volt @ 105°C)</b>												
NOJP225M010#WJ	P	2.2	10	1.0	8	8.3	0.093	0.084	0.037	0.773	0.696	0.309
NOJP335M010#WJ	P	3.3	10	1.0	8	7	0.101	0.091	0.041	0.710	0.639	0.284
NOJT475M010#WJ	T	4.7	10	1.0	6	3.1	0.176	0.158	0.070	0.546	0.491	0.218
NOJT685M010#WJ	T	6.8	10	1.4	6	2.6	0.192	0.173	0.077	0.500	0.450	0.200
NOJT106M010#WJ	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

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 114 (6. Moisture Sensitivity Level) or packaging and reel label.

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