

# Tantalum & Niobium Oxide Capacitors

## (excluding F-series)

### Tape & Reel Packaging

Tape and reel packaging for automatic component placement.  
Please enter required Suffix on order. Bulk packaging is not available.

#### TAPE SPECIFICATION

Tape dimensions comply to EIA 481-1 Dimensions A<sub>0</sub> and B<sub>0</sub> of the pocket and the tape thickness, K, are dependent on the component size. Tape materials do not affect component solderability during storage. Carrier Tape Thickness <0.4mm.

#### TAPING SUFFIX TABLE TAJ, TMJ, TPS, TPM, TRJ, TRM, THJ, TAW, TLJ, TLN TCJ, TCM, TCN, NLJ, NOJ, NOS, NOM

Case Size	Tape width mm	P mm	180mm (7") reel Tin Termination			330mm (13") reel Tin Termination			180mm (7") reel & Gold Termination	
			Suffix	Automotive Suffix	Qty.	Suffix	Automotive Suffix	Qty.	Suffix	Qty.
A	8	4	R	T	2,000	S	U	8,000	A	2,000
B	8	4	R	T	2,000	S	U	8,000	A	2,000
C	12	8	R	T	500	S	U	3,000	A	500
D	12	8	R	T	500	S	U	2,500	A	500
E	12	8	R	T	400	S	U	1,500	A	400
F	12	8	R	-	1,000	S	-	4,000	A	1,000
G	8	4	R	-	2,500	S	-	10,000	A	2,500
H	8	4	R	-	2,500	S	-	10,000	A	2,500
K	8	4	R	-	3,000	S	-	13,000	A	3,000
L	8	4	R	-	2,500	S	-	10,000	A	2,500
M	8	4	R	-	3,000	S	-	13,000	A	3,000
N	8	4	R	-	3,000	S	-	13,000	A	3,000
P	8	4	R	-	2,500	S	-	10,000	A	2,500
R	8	4	R	-	2,500	S	-	10,000	A	2,500
S	8	4	R	-	2,500	S	-	10,000	A	2,500
T	8	4	R	-	2,500	S	-	10,000	A	2,500
U	16	8	R	-	400	-	-	-	-	-
V	12	8	R	-	400	S	-	1,500	A	400
W	12	8	R	-	1,000	S	-	5,000	A	1,000
X	12	8	R	-	1,000	S	-	5,000	A	1,000
Y	12	8	R	-	1,000	S	-	4,000	A	1,000
Z	16	8	R	-	400	S	-	1,500	-	-
4	16	8	R	-	800	S	-	TBD	-	-
6	24	12	R	-	500	S	-	TBD	-	-

Under Development

#### TAPING SUFFIX TABLE TAC AND TLC

Case Size	Tape width mm	P mm	100mm (4") reel Tin Termination		180mm (7") reel Tin Termination		100mm (4") reel & Gold Termination		180mm (7") reel & 100% Gold Termination	
			Suffix	Qty.	Suffix	Qty.	Suffix	Qty.	Suffix	Qty.
A	8	4	XTA	500	RTA	2,000	FTA	500	ATA	2,000
B	8	4	XTA	500	RTA	2,500	FTA	500	ATA	2,500
C	8	4	XTA	500	RTA	3,500	-	-	-	-
H	8	4	XTA	500	RTA	3,500	FTA	500	ATA	3,500
J	8	4	XTA	500	RTA	3,500	FTA	500	ATA	3,500
K	8	2	QTA	1,000	PTA	10,000	NTA	1,000	MTA	10,000
L	8	4	XTA	500	RTA	3,500	FTA	500	ATA	3,500
M	8	4	XTA	500	RTA	2,500	FTA	500	ATA	2,500
N	8	2	QTA	1,000	PTA	10,000	-	-	-	-
Q	8	4	XTA	500	RTA	2,500	-	-	-	-
R	8	4	XTA	500	RTA	2,500	FTA	500	ATA	2,500
S	8	4	XTA	500	RTA	2,500	-	-	-	-
T	8	4	XTA	500	RTA	2,500	FTA	500	ATA	2,500
U	8	4	XTA	500	RTA	3,500	FTA	500	ATA	3,500
V	8	4	XTA	500	RTA	2,500	FTA	500	ATA	2,500
Z	8	2	QTA	1,000	PTA	10,000	-	-	-	-

Under Development

# Tantalum & Niobium Oxide Capacitors

## (excluding F-series)

### Tape & Reel Packaging

#### TAPING SUFFIX TABLE TPC

Case Size	Tape width mm	P mm	100mm (4") reel Tin Termination		180mm (7") reel Tin Termination		100mm (4") reel & Gold Termination		180mm (7") reel & 100% Gold Termination	
			Suffix	Qty.	Suffix	Qty.	Suffix	Qty.	Suffix	Qty.
H	8	4	Xxxxx	500	Rxxxx	3,500	Fxxxx	500	Axxxx	3,500
K	8	2	Qxxxx	1,000	Pxxxx	10,000	Nxxxx	1,000	Mxxxx	10,000
L	8	4	Xxxxx	500	Rxxxx	3,500	Fxxxx	500	Axxxx	3,500
R	8	4	Xxxxx	500	Rxxxx	2,500	Fxxxx	500	Axxxx	2,500

Note: xxxx = ESR value in Milliohms

#### TAPING SUFFIX TABLE TLC

Case Size	Tape width mm	P mm	100mm (4") reel Tin Termination		180mm (7") reel Tin Termination		100mm (4") reel & Gold Termination		180mm (7") reel & 100% Gold Termination	
			Suffix	Qty.	Suffix	Qty.	Suffix	Qty.	Suffix	Qty.
L	8	4	Xxxxx	500	Rxxxx	3,500	Fxxxx	500	Axxxx	3,500

Note: xxxx = ESR value in Milliohms

# Tantalum & Niobium Oxide Capacitors

## (excluding F-series)

### Tape & Reel Packaging

#### PLASTIC TAPE DIMENSIONS TAJ, TMJ, TPS, TPM, TRJ, TRM, THJ, TAW, TLJ, TLN, TCJ, TCM, TCN, NLJ, NOJ, NOS AND NOM

Case	A0±0.10	B0±0.10	K±0.10	W±0.30	E±0.10	F±0.05	G min.	P±0.10	P2±0.05	P0±0.10	D <sup>+0.20</sup> <sub>-0.00</sub>	D1 <sup>+0.25</sup> <sub>-0.00</sub>
A	1.83	3.57	1.87	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
B	3.15	3.77	2.22	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
C	3.45	6.40	2.92	12.00	1.75	5.50	0.75	8.00	2.00	4.00	1.50	1.50
D	4.48	7.62	3.22	12.00	1.75	5.50	0.75	8.00	2.00	4.00	1.50	1.50
E	4.50	7.50	4.50	12.00	1.75	5.50	0.75	8.00	2.00	4.00	1.50	1.50
F	3.35	6.40	2.20	12.00	1.75	5.50	0.75	8.00	2.00	4.00	1.50	1.50
G	1.83	3.57	1.65	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
H	3.15	3.77	1.66	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
K	1.95	3.55	1.15	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
L	3.10	3.80	1.30	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
M	1.60	2.35	1.10	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
N	1.60	2.30	1.10	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
P	1.65	2.45	1.60	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
R	1.65	2.45	1.30	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
S	1.95	3.55	1.30	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
T	3.20	3.80	1.30	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
U	6.19	7.66	4.72	16.00	1.75	7.50	0.75	8.00	2.00	4.00	1.50	1.50
V	6.43	7.44	3.84	12.00	1.75	5.50	0.75	8.00	2.00	4.00	1.50	1.50
W	3.57	6.40	1.65	12.00	1.75	5.50	0.75	8.00	2.00	4.00	1.50	1.50
X	4.67	7.62	1.65	12.00	1.75	5.50	0.75	8.00	2.00	4.00	1.50	1.50
Y	4.67	7.62	2.15	12.00	1.75	5.50	0.75	8.00	2.00	4.00	1.50	1.50
4	6.25	7.88	2.25	16.00	1.75	7.50±0.1	0.75	8.00	2.00±0.1	4.00	1.50	1.50
6	8.55	15.60	2.25	24.00	1.75	11.50	0.75	12.00	2.00	4.00	1.50	1.50

#### PLASTIC TAPE DIMENSIONS TAC, TLC AND TPC

Case	A0±0.10	B0±0.10	K±0.10	W±0.30	E±0.10	F±0.05	G min.	P±0.10	P2±0.05	P0±0.10	D <sup>+0.20</sup> <sub>-0.00</sub>	D1 <sup>+0.20</sup> <sub>-0.00</sub>
A	1.83±0.10	3.57±0.10	1.87±0.10	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
B	3.15±0.10	3.77±0.10	1.66±0.10	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
C	1.95±0.10	3.55±0.10	1.15±0.10	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
H	1.65±0.10	2.45±0.10	1.10±0.05	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
J	1.05 <sup>+0.10</sup> <sub>-0.00</sub>	1.90 <sup>+0.10</sup> <sub>-0.00</sub>	0.80 <sup>+0.10</sup> <sub>-0.00</sub>	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	0.80
K	0.75 <sup>+0.05</sup> <sub>-0.00</sub>	1.26 <sup>+0.10</sup> <sub>-0.00</sub>	0.67 <sup>+0.10</sup> <sub>-0.00</sub>	8.00	1.75	3.50	0.75	2.00	2.00	2.00	1.50	0.50
L	1.05 <sup>+0.10</sup> <sub>-0.00</sub>	1.90 <sup>+0.10</sup> <sub>-0.00</sub>	1.05 <sup>+0.10</sup> <sub>-0.00</sub>	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	0.80
M	1.05 <sup>+0.10</sup> <sub>-0.00</sub>	2.45±0.10	1.05 <sup>+0.10</sup> <sub>-0.00</sub>	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	0.80
Q	1.65±0.10	2.45±0.10	1.30±0.10	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
R	1.65±0.10	2.45±0.10	1.60±0.10	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
S	1.95±0.10	3.55±0.10	1.30±0.10	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
T	3.20±0.10	3.80±0.10	1.30±0.10	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
U	1.65±0.10	2.45±0.10	0.80±0.05	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
V	1.95±0.10	3.60±0.10	0.90±0.10	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
X	1.83±0.10	3.57±0.10	1.87±0.10	8.00	1.75	3.50	0.75	4.00	2.00	4.00	1.50	1.00
Z	0.75 <sup>+0.05</sup> <sub>-0.00</sub>	1.90 <sup>+0.10</sup> <sub>-0.00</sub>	0.67 <sup>+0.10</sup> <sub>-0.00</sub>	8.00	1.75	3.50	0.75	2.00	2.00	2.00	1.50	0.50

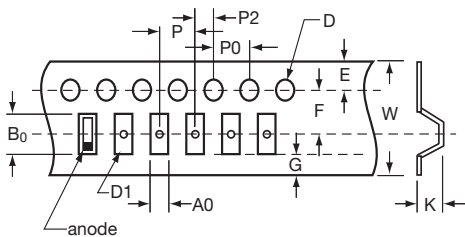
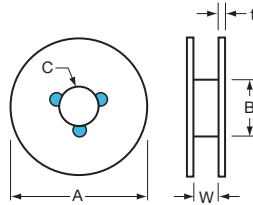
Under development

# Tantalum & Niobium Oxide Capacitors **AVX** (excluding F-series)

## Tape & Reel Packaging

### REEL DIMENSIONS

Reel Size	Tape	A	B	C	W	t
180mm (7")	12mm	178±2.00	50 min	13.0±0.50	12.4+1.5/-0	1.50±0.50
180mm (7")	8mm	178±2.00	50 min	13.0±0.50	8.4+1.5/-0	1.50±0.50
330mm (13")	12mm	328±2.00	50 min	13.0±0.50	12.4+1.5/-0	1.50±0.50
330mm (13")	8mm	328±2.00	50 min	13.0±0.50	8.4+1.5/-0	1.50±0.50
108mm (4.25")	8mm	108±2.00		13.0±0.50	8.4+1.5/-0	1.50±0.50



### COVER TAPE NOMINAL DIMENSIONS

Thickness: 75µm  
Width of tape: 5.5mm (8mm tape)  
9.5mm (12mm tape)

# Tantalum & Niobium Oxide Capacitors **AVX**

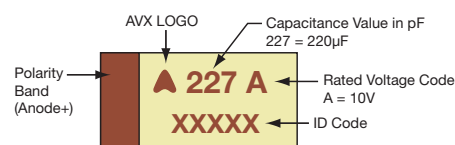
## Marking

For TAJ, TPS & THJ, the positive end of body has videcon readable polarity marking as shown in the diagram. Bodies are marked by indelible laser marking on top surface with capacitance value, voltage and ID code. N, P and R case is an exception due to small size in which only the voltage and capacitance values are printed.

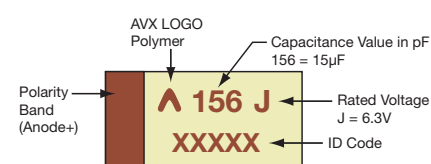
### All series excluding F-Series capacitors

Voltage Code	Rated Voltage at 85°C	Voltage Code	Rated Voltage at 85°C
x	1.8	D	20
e	2.5	E	25
G	4	V	35
J	6.3	T	50
P	8	J	63
A	10	P	75
B	12	A	100
C	16	B	125

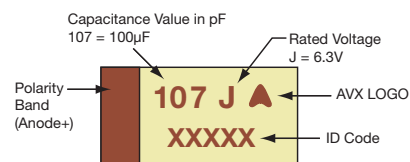
### TAJ, TMJ, TRJ, TRM, TPS, TPM – A, B, C, D, E, F, H, K, S, T, U, V, W, X AND Y CASE:



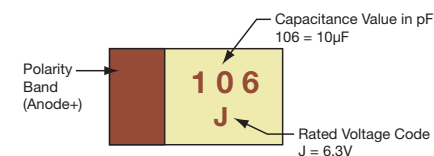
### TCJ, TCM, TCN – A, B, C, D, E, G, H, K, L, S, T, V, W, Y CASE:



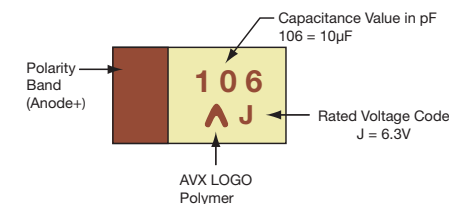
### TLJ, TLN – A, B, F, G, H, K, L, S, T, V, W, Y CASE:



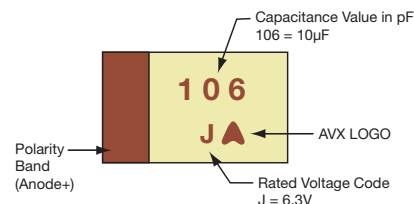
### TAJ, TPS – P AND R CASE:



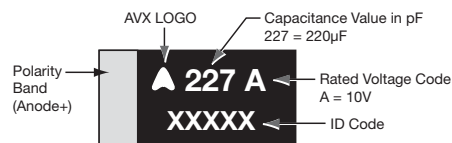
### TCJ – N, P, R CASE:



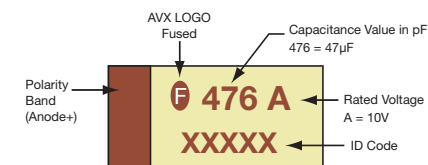
### TLJ, TLN – M, N, P, R CASE:



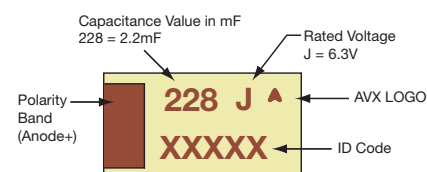
### THJ – A, B, C, D, E CASE:



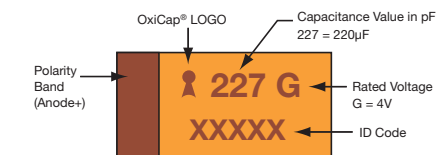
### TAW – D CASE:



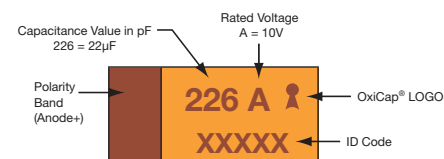
### TLN PULSECAP™ 4 AND 6 CASE:



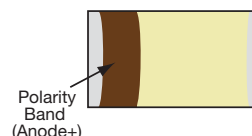
### NOJ, NOS, NOM – A, B, C, D, E, F, S, T, V, W, X, Y CASE:



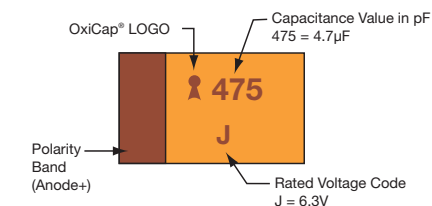
### NLJ – A, B, G, P, S, T, CASE:



### TAC, TLC, TPC – ALL CASE SIZES:



### NOJ – P CASE:



**F-SERIES CAPACITORS  
PLEASE REFER TO THE CATALOGUE SHEET**