

# TBJ Series



## CWR11 - MIL-PRF-55365/8 Established Reliability, COTS-Plus & Space Level



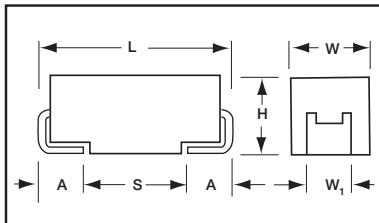
Fully qualified to MIL-PRF-55365/8, the CWR11 is the military version of EIA-535BAAC, with four case sizes designed for maximum packaging efficiency on 8mm & 12mm tape for high volume production (ensuring no TCE mismatch with any substrate). This construction is compatible with a wide range of SMT board assembly processes including wave or reflow solder, conductive epoxy or compression bonding techniques. The part also carries full polarity, capacitance / voltage and JAN brand marking.

For Space Level applications, AVX SRC9000 qualification is recommended (see ratings table for part number availability).

There are four termination finishes available: solder plated, fused solder plated, hot solder dipped and gold plated (these are "H", "K", "C" and "B" termination, respectively, per MIL-PRF-55365).

The molding compound has been selected to meet the requirements of UL94V-0 (Flame Retardancy) and outgassing requirements of NASA SP-R-0022A.

The series is qualified to MIL-PRF-55365 Weibull "B", "C", "D" and "T" levels, with all surge options ("A", "B" & "C") available.



### MARKING

(Brown marking on gold body)



Polarity Stripe (+)

"J" for "JAN" Brand Capacitance Code

Rated Voltage  
Manufacturer's ID

### CASE DIMENSIONS: millimeters (inches)

Case Code	EIA Metric	Length (L)	Width (W)	Height (H)	Term. Width (W <sub>1</sub> ) ±0.10 (±0.004)	Term. Length A ±0.30(±0.012)	S min
A	3216-18	3.20±0.20 (0.126±0.008)	1.60±0.20 (0.063±0.008)	1.60±0.20 (0.063±0.008)	1.20 (0.047)	0.80 (0.031)	1.80 (0.071)
B	3528-21	3.50±0.20 (0.138±0.008)	2.80±0.20 (0.110±0.008)	1.90±0.20 (0.075±0.008)	2.20 (0.087)	0.80 (0.031)	1.40 (0.055)
C	6032-28	6.00±0.30 (0.236±0.012)	3.20±0.30 (0.126±0.012)	2.50±0.30 (0.098±0.012)	2.20 (0.087)	1.30 (0.051)	2.90 (0.114)
D	7343-31	7.30±0.30 (0.287±0.012)	4.30±0.30 (0.169±0.012)	2.80±0.30 (0.110±0.012)	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)

### CAPACITANCE AND RATED VOLTAGE, V<sub>R</sub> (MIL VOLTAGE CODE) RANGE CASE SIZE

Capacitance		Rated voltage DC (V <sub>R</sub> ) to 85°C							
μF	Code	4V (C)	6V (D)	10V (F)	15V (H)	20V (J)	25V (K)	35V (M)	50V (N)
0.10	104							A	A
0.15	154							A	B
0.22	224							A	B
0.33	334						A	A	B
0.47	474					A	A	B	C
0.68	684				A	A	B	B	C
1.0	105			A	A	A	B	B	C
1.5	155		A	A	A	B	B	C	D
2.2	225	A	A	A	B	B	C	C	D
3.3	335		A	B	B	B	C	C	D
4.7	475	A	B	B	B	C	C	D	D
6.8	685	B	B	B	B	C	D	D	
10	106	B	B		C		D		
15	156	B	C	C		D	D		
22	226		C		D	D			
33	336	C		D	D				
47	476		D						
68	686	D	D						
100	107	D							
150	157								
220	227								
330	337								



### HOW TO ORDER

#### COTS-PLUS & MIL QPL (CWR11):

TBJ	D	686	*	006	C	□	#	@	0	^	++
<b>Type</b>	<b>Case Size</b>	<b>Capacitance Code</b> pF code: 1st two digits represent significant figures 3rd digit represents multiplier (number of zeros to follow)	<b>Capacitance Tolerance</b> M = ±20% K = ±10% J = ±5%	<b>Voltage Code</b> 004 = 4Vdc 006 = 6Vdc 010 = 10Vdc 015 = 15Vdc 020 = 20Vdc 025 = 25Vdc 035 = 35Vdc 050 = 50Vdc	<b>Standard or Low ESR Range</b> C = Std ESR L = Low ESR	<b>Packaging</b> B = Bulk R = 7" T&R S = 13" T&R W = Waffle  See page 5 for additional packaging options.	<b>Inspection Level</b> S = Std. Conformance L = Group A  M = MIL (JAN) CWR11	<b>Reliability Grade</b> Weibull: B = 0.1%/1000 hrs. 90% conf. C = 0.01%/1000 hrs. 90% conf. D = 0.001%/1000 hrs. 90% conf. T = T Level Z = Non-ER	<b>Qualification Level</b> 0 = N/A 9 = SRC9000	<b>Termination Finish</b> H = Solder Plated 0 = Fused Solder Plated 8 = Hot Solder Dipped 9 = Gold Plated 7 = Matte Sn (COTS-Plus only)	<b>Surge Test Option</b> 00 = None 23 = 10 Cycles, +25°C 24 = 10 Cycles, -55°C & +85°C 45 = 10 cycles, -55°C & +85°C before Weibull

#### CWR11 P/N CROSS REFERENCE:

CWR11	D	^	686	*	@	+	□
<b>Type</b>	<b>Voltage Code</b> C = 4Vdc D = 6Vdc F = 10Vdc H = 15Vdc J = 20Vdc K = 25Vdc M = 35Vdc N = 50Vdc	<b>Termination Finish</b> H = Solder Plated K = Solder Fused Dipped C = Hot Solder Dipped B = Gold Plated	<b>Capacitance Code</b> pF code: 1st two digits represent significant figures 3rd digit represents multiplier (number of zeros to follow)	<b>Capacitance Tolerance</b> M = ±20% K = ±10% J = ±5%	<b>Reliability Grade</b> Weibull: B = 0.1%/1000 hrs. 90% conf. C = 0.01%/1000 hrs. 90% conf. D = 0.001%/1000 hrs. 90% conf. T = T Level A = Non-ER	<b>Surge Test Option</b> A = 10 cycles, +25°C B = 10 cycles, -55°C & +85°C C = 10 cycles, -55°C & +85°C before Weibull If blank, None required	<b>Packaging</b> Bulk = Standard TR = 7" T&R WR = Waffle  See page 5 for additional packaging options.

#### SPACE LEVEL OPTIONS TO SRC9000\*:

TBJ	D	686	*	006	C	□	L	@	9	^	++
<b>Type</b>	<b>Case Size</b>	<b>Capacitance Code</b> pF code: 1st two digits represent significant figures 3rd digit represents multiplier (number of zeros to follow)	<b>Capacitance Tolerance</b> M = ±20% K = ±10% J = ±5%	<b>Voltage Code</b> 004 = 4Vdc 006 = 6Vdc 010 = 10Vdc 015 = 15Vdc 020 = 20Vdc 025 = 25Vdc 035 = 35Vdc 050 = 50Vdc	<b>Standard or Low ESR Range</b> C = Std ESR L = Low ESR	<b>Packaging</b> B = Bulk R = 7" T&R S = 13" T&R W = Waffle  See page 5 for additional packaging options.	<b>Inspection Level</b> L = Group A	<b>Reliability Grade</b> Weibull: B = 0.1%/1000 hrs. 90% conf. C = 0.01%/1000 hrs. 90% conf. D = 0.001%/1000 hrs. 90% conf.	<b>Qualification Level</b> 9 = SRC9000	<b>Termination Finish</b> H = Solder Plated 0 = Fused Solder Plated 8 = Hot Solder Dipped 9 = Gold Plated	<b>Surge Test Option</b> 00 = 10 Cycles, -55°C & +85°C 45 = 10 cycles, -55°C & +85°C before Weibull

\*Contact factory for AVX SRC9000 Space Level SCD details.

### TECHNICAL SPECIFICATIONS

Technical Data:	Unless otherwise specified, all technical data relate to an ambient temperature of 25°C									
Capacitance Range:	0.1 μF to 100 μF									
Capacitance Tolerance:	±5%; ±10%; ±20%									
Rated Voltage: (V <sub>R</sub> )	≤85°C:	4	6	10	16	20	25	35	50	
Category Voltage: (V <sub>C</sub> )	125°C:	2.7	4	7	10	13	17	23	33	
Surge Voltage: (V <sub>S</sub> )	≤85°C:	5.2	8	13	20	26	32	46	65	
	125°C:	3.4	5	8	13	16	20	28	40	
Temperature Range:	-55°C to +125°C									

# TBJ Series

CWR11 - MIL-PRF-55365/8 Established Reliability, COTS-Plus & Space Level



RATING & PART NUMBER REFERENCE				Parametric Specifications by Rating per MIL-PRF-55365/8										Typical Ripple Data by Rating				
CWR11 P/N	AVX COTS-Plus P/N	AVX SRC9000 P/N	Case	Cap @ 120Hz µF @ 25°C	DC Rated Voltage V @ +85°C	ESR @ 100kHz Ohms @ +25°C	DCL max			DF Max		Power Dissipation W	Ripple					
							+25°C (µA)	+85°C (µA)	+125°C (µA)	+25°C (%)	+85/125°C (%)		25°C Ripple A (100kHz)	85°C Ripple A (100kHz)	125°C Ripple A (100kHz)	25°C Ripple V (100kHz)	85°C Ripple V (100kHz)	125°C Ripple V (100kHz)
CWR11C*225*0+□	TBJA 225 * 004 C □ □ # 0 0 + +	TBJA 225 * 004 C □ □ L 0 0 + +	A	2.2	4	8	0.5	5	6	6	9	0.075	0.10	0.09	0.04	0.77	0.70	0.31
CWR11C*475*0+□	TBJA 475 * 004 C □ □ # 0 0 + +	TBJA 475 * 004 C □ □ L 0 0 + +	A	4.7	4	8	0.5	5	6	6	9	0.075	0.10	0.09	0.04	0.77	0.70	0.31
CWR11C*685*0+□	TBJB 685 * 004 C □ □ # 0 0 + +	TBJB 685 * 004 C □ □ L 0 0 + +	B	6.8	4	5.5	0.5	5	6	6	9	0.085	0.12	0.11	0.05	0.68	0.62	0.27
CWR11C*100*0+□	TBJB 106 * 004 C □ □ # 0 0 + +	TBJB 106 * 004 C □ □ L 0 0 + +	B	10	4	4	0.5	5	6	6	9	0.085	0.15	0.13	0.06	0.58	0.52	0.23
CWR11C*156*0+□	TBJB 156 * 004 C □ □ # 0 0 + +	TBJB 156 * 004 C □ □ L 0 0 + +	B	15	4	3.5	0.6	6	7.2	6	9	0.085	0.18	0.14	0.06	0.55	0.49	0.22
CWR11C*336*0+□	TBJC 336 * 004 C □ □ # 0 0 + +	TBJC 336 * 004 C □ □ L 0 0 + +	C	33	4	2.2	1.3	13	15.6	6	9	0.110	0.22	0.20	0.09	0.49	0.44	0.20
CWR11C*686*0+□	TBJD 686 * 004 C □ □ # 0 0 + +	TBJD 686 * 004 C □ □ L 0 0 + +	D	68	4	1.1	2.7	27	32.4	6	9	0.150	0.37	0.33	0.15	0.41	0.37	0.16
CWR11C*107*0+□	TBJD 107 * 004 C □ □ # 0 0 + +	TBJD 107 * 004 C □ □ L 0 0 + +	D	100	4	0.9	4	40	48	8	12	0.150	0.41	0.37	0.16	0.37	0.33	0.15
CWR11D*155*0+□	TBJA 155 * 006 C □ □ # 0 0 + +	TBJA 155 * 006 C □ □ L 0 0 + +	A	1.5	6	8	0.5	5	6	6	9	0.075	0.10	0.09	0.04	0.77	0.70	0.31
CWR11D*225*0+□	TBJA 225 * 006 C □ □ # 0 0 + +	TBJA 225 * 006 C □ □ L 0 0 + +	A	2.2	6	8	0.5	5	6	6	9	0.075	0.10	0.09	0.04	0.77	0.70	0.31
CWR11D*335*0+□	TBJA 335 * 006 C □ □ # 0 0 + +	TBJA 335 * 006 C □ □ L 0 0 + +	A	3.3	6	8	0.5	5	6	6	9	0.075	0.10	0.09	0.04	0.77	0.70	0.31
CWR11D*475*0+□	TBJB 475 * 006 C □ □ # 0 0 + +	TBJB 475 * 006 C □ □ L 0 0 + +	B	4.7	6	5.5	0.5	5	6	6	9	0.085	0.12	0.11	0.05	0.68	0.62	0.27
CWR11D*685*0+□	TBJB 685 * 006 C □ □ # 0 0 + +	TBJB 685 * 006 C □ □ L 0 0 + +	B	6.8	6	4.5	0.5	5	6	6	9	0.085	0.14	0.12	0.05	0.62	0.56	0.25
CWR11D*106*0+□	TBJB 106 * 006 C □ □ # 0 0 + +	TBJB 106 * 006 C □ □ L 0 0 + +	B	10	6	3.5	0.6	6	7.2	6	9	0.085	0.16	0.14	0.06	0.55	0.49	0.22
CWR11D*156*0+□	TBJC 156 * 006 C □ □ # 0 0 + +	TBJC 156 * 006 C □ □ L 0 0 + +	C	15	6	3	0.9	9	10.8	6	9	0.110	0.19	0.17	0.08	0.57	0.52	0.23
CWR11D*226*0+□	TBJC 226 * 006 C □ □ # 0 0 + +	TBJC 226 * 006 C □ □ L 0 0 + +	C	22	6	2.2	1.4	14	16.8	6	9	0.110	0.22	0.20	0.09	0.49	0.44	0.20
CWR11D*476*0+□	TBJD 476 * 006 C □ □ # 0 0 + +	TBJD 476 * 006 C □ □ L 0 0 + +	D	47	6	1.1	2.8	28	33.6	6	9	0.150	0.37	0.33	0.15	0.41	0.37	0.16
CWR11D*686*0+□	TBJD 686 * 006 C □ □ # 0 0 + +	TBJD 686 * 006 C □ □ L 0 0 + +	D	68	6	0.9	4.3	43	51.6	6	9	0.150	0.41	0.37	0.16	0.37	0.33	0.15
CWR11FA105*0+□	TBJA 105 * 010 C □ □ # 0 0 + +	TBJA 105 * 010 C □ □ L 0 0 + +	A	1	10	10	0.5	5	6	4	6	0.075	0.09	0.08	0.03	0.87	0.78	0.35
CWR11FA155*0+□	TBJA 155 * 010 C □ □ # 0 0 + +	TBJA 155 * 010 C □ □ L 0 0 + +	A	1.5	10	8	0.5	5	6	6	6	0.075	0.10	0.09	0.04	0.77	0.70	0.31
CWR11FA225*0+□	TBJA 225 * 010 C □ □ # 0 0 + +	TBJA 225 * 010 C □ □ L 0 0 + +	A	2.2	10	8	0.5	5	6	6	9	0.075	0.10	0.09	0.04	0.77	0.70	0.31
CWR11FA335*0+□	TBJB 335 * 010 C □ □ # 0 0 + +	TBJB 335 * 010 C □ □ L 0 0 + +	B	3.3	10	5.5	0.5	5	6	6	9	0.085	0.12	0.11	0.05	0.68	0.62	0.27
CWR11FA475*0+□	TBJB 475 * 010 C □ □ # 0 0 + +	TBJB 475 * 010 C □ □ L 0 0 + +	B	4.7	10	4.5	0.5	5	6	6	9	0.085	0.14	0.12	0.05	0.62	0.56	0.25
CWR11FA685*0+□	TBJB 685 * 010 C □ □ # 0 0 + +	TBJB 685 * 010 C □ □ L 0 0 + +	B	6.8	10	3.5	0.7	7	8.4	6	9	0.085	0.16	0.14	0.06	0.55	0.49	0.22
CWR11FA156*0+□	TBJC 156 * 010 C □ □ # 0 0 + +	TBJC 156 * 010 C □ □ L 0 0 + +	C	15	10	2.5	1.5	15	18	6	9	0.110	0.21	0.19	0.08	0.52	0.47	0.21
CWR11FA336*0+□	TBJD 336 * 010 C □ □ # 0 0 + +	TBJD 336 * 010 C □ □ L 0 0 + +	D	33	10	1.1	3.3	33	39.6	6	9	0.150	0.37	0.33	0.15	0.41	0.37	0.16
CWR11FA476*0+□	TBJD 476 * 010 C □ □ # 0 0 + +	TBJD 476 * 010 C □ □ L 0 0 + +	D	47	10	0.9	4.7	47	56.4	6	9	0.150	0.41	0.37	0.16	0.37	0.33	0.15
CWR11HA684*0+□	TBJA 684 * 015 C □ □ # 0 0 + +	TBJA 684 * 015 C □ □ L 0 0 + +	A	0.68	15	12	0.5	5	6	4	6	0.075	0.08	0.07	0.03	0.95	0.85	0.38
CWR11HA105*0+□	TBJA 105 * 015 C □ □ # 0 0 + +	TBJA 105 * 015 C □ □ L 0 0 + +	A	1	15	10	0.5	5	6	4	6	0.075	0.09	0.08	0.03	0.87	0.78	0.35
CWR11HA155*0+□	TBJA 155 * 015 C □ □ # 0 0 + +	TBJA 155 * 015 C □ □ L 0 0 + +	A	1.5	15	8	0.5	5	6	6	9	0.075	0.10	0.09	0.04	0.77	0.70	0.31
CWR11HA225*0+□	TBJB 225 * 015 C □ □ # 0 0 + +	TBJB 225 * 015 C □ □ L 0 0 + +	B	2.2	15	5.5	0.5	5	6	6	9	0.085	0.12	0.11	0.05	0.68	0.62	0.27
CWR11HA335*0+□	TBJB 335 * 015 C □ □ # 0 0 + +	TBJB 335 * 015 C □ □ L 0 0 + +	B	3.3	15	5	0.5	5	6	6	9	0.085	0.13	0.12	0.05	0.65	0.59	0.26
CWR11HA475*0+□	TBJB 475 * 015 C □ □ # 0 0 + +	TBJB 475 * 015 C □ □ L 0 0 + +	B	4.7	15	4	0.7	7	8.4	6	9	0.085	0.15	0.13	0.06	0.58	0.52	0.23
CWR11HA106*0+□	TBJC 106 * 015 C □ □ # 0 0 + +	TBJC 106 * 015 C □ □ L 0 0 + +	C	10	15	2.5	1.6	16	19.2	6	8	0.110	0.21	0.19	0.08	0.52	0.47	0.21
CWR11HA226*0+□	TBJC 226 * 015 C □ □ # 0 0 + +	TBJC 226 * 015 C □ □ L 0 0 + +	D	22	15	1.1	3.3	33	39.6	6	8	0.150	0.37	0.33	0.15	0.41	0.37	0.16
CWR11HA336*0+□	TBJD 336 * 015 C □ □ # 0 0 + +	TBJD 336 * 015 C □ □ L 0 0 + +	D	33	15	0.9	5.3	53	63.6	6	9	0.150	0.41	0.37	0.16	0.37	0.33	0.15
CWR11JA474*0+□	TBJA 474 * 020 C □ □ # 0 0 + +	TBJA 474 * 020 C □ □ L 0 0 + +	A	0.47	20	14	0.5	5	6	4	6	0.075	0.07	0.07	0.03	1.02	0.92	0.41
CWR11JA684*0+□	TBJA 684 * 020 C □ □ # 0 0 + +	TBJA 684 * 020 C □ □ L 0 0 + +	A	0.68	20	12	0.5	5	6	4	6	0.075	0.08	0.07	0.03	0.95	0.85	0.38
CWR11JA105*0+□	TBJA 105 * 020 C □ □ # 0 0 + +	TBJA 105 * 020 C □ □ L 0 0 + +	A	1	20	10	0.5	5	6	4	6	0.075	0.09	0.08	0.03	0.87	0.78	0.35
CWR11JA155*0+□	TBJB 155 * 020 C □ □ # 0 0 + +	TBJB 155 * 020 C □ □ L 0 0 + +	B	1.5	20	6	0.5	5	6	6	9	0.085	0.12	0.11	0.05	0.71	0.64	0.29
CWR11JA225*0+□	TBJB 225 * 020 C □ □ # 0 0 + +	TBJB 225 * 020 C □ □ L 0 0 + +	B	2.2	20	5	0.5	5	6	6	9	0.085	0.13	0.12	0.05	0.65	0.59	0.26
CWR11JA335*0+□	TBJB 335 * 020 C □ □ # 0 0 + +	TBJB 335 * 020 C □ □ L 0 0 + +	B	3.3	20	4	0.7	7	8.4	6	9	0.085	0.15	0.13	0.06	0.58	0.52	0.23
CWR11JA475*0+□	TBJC 475 * 020 C □ □ # 0 0 + +	TBJC 475 * 020 C □ □ L 0 0 + +	C	4.7	20	3	1	10	12	6	8	0.110	0.19	0.17	0.08	0.57	0.52	0.23
CWR11JA685*0+□	TBJC 685 * 020 C □ □ # 0 0 + +	TBJC 685 * 020 C □ □ L 0 0 + +	C	6.8	20	2.4	1.4	14	16.8	6	9	0.110	0.21	0.19	0.09	0.51	0.46	0.21
CWR11JA156*0+□	TBJD 156 * 020 C □ □ # 0 0 + +	TBJD 156 * 020 C □ □ L 0 0 + +	D	15	20	1.1	3	30	36	6	8	0.150	0.37	0.33	0.15	0.41	0.37	0.16
CWR11JA226*0+□	TBJD 226 * 020 C □ □ # 0 0 + +	TBJD 226 * 020 C □ □ L 0 0 + +	D	22	20	0.9	4.4	44	52.8	6	9	0.150	0.41	0.37	0.16	0.37	0.33	0.15
CWR11KA334*0+□	TBJA 334 * 025 C □ □ # 0 0 + +	TBJA 334 * 025 C □ □ L 0 0 + +	A	0.33	25	15	0.5	5	6	4	6	0.075	0.07	0.06	0.03	1.06	0.95	0.42
CWR11KA474*0+□	TBJA 474 * 025 C □ □ # 0 0 + +	TBJA 474 * 025 C □ □ L 0 0 + +	A	0.47	25	14	0.5	5	6	4	6	0.075	0.07	0.07	0.03	1.02	0.92	0.41
CWR11KA684*0+□	TBJB 684 * 025 C □ □ # 0 0 + +	TBJB 684 * 025 C □ □ L 0 0 + +	B	0.68	25	7.5	0.5	5	6	4	6	0.085	0.11	0.10	0.04	0.80	0.72	0.32
CWR11KA105*0+□	TBJB 105 * 025 C □ □ # 0 0 + +	TBJB 105 * 025 C □ □ L 0 0 + +	B	1	25	6.5	0.5	5	6	4	6	0.085	0.11	0.10	0.05	0.74	0.67	0.30
CWR11KA155*0+□	TBJB 155 * 025 C □ □ # 0 0 + +	TBJB 155 * 025 C □ □ L 0 0 + +	B	1.5	25	6.5	0.5	5	6	6	8	0.085	0.11	0.10	0.05	0.74	0.67	0.30
CWR11KA225*0+□	TBJC 225 * 025 C □ □ # 0 0 + +	TBJC 225 * 025 C □ □ L 0 0 + +	C	2.2	25	3.5	0.6	6	7.2	6	9	0.110	0.18	0.16	0.07	0.62	0.56	0.25
CWR11KA335*0+□	TBJC 335 * 025 C □ □ # 0 0 + +	TBJC 335 * 025 C □ □ L 0 0 + +	C	3.3	25	3.5	0.9	9	10.8	6	8	0.110	0.18	0.16	0.07	0.62	0.56	0.25
CWR11KA475*0+□	TBJC 475 * 025 C □ □ # 0 0 + +	TBJC 475 * 025 C □ □ L 0 0 + +	C	4.7	25	2.5	1.2	12	14.4	6	9	0.110	0.21	0.19	0.08	0.52	0.47	0.21
CWR11KA685*0+□	TBJD 685 * 025 C □ □ # 0 0 + +	TBJD 685 * 025 C □ □ L 0 0 + +	D	6.8	25	1.4	1.7	17	20.4	6	9	0.150	0.33	0.29	0.13	0.46	0.41	0.18

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.

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.



# TBJ Series

CWR11 - MIL-PRF-55365/8 Established Reliability, COTS-Plus & Space Level



RATING & PART NUMBER REFERENCE				Parametric Specifications by Rating per MIL-PRF-55365/8										Typical Ripple Data by Rating					
CWR11 P/N	AVX COTS-Plus P/N	AVX SRC9000 P/N	Case	Cap @ 120Hz @ 25°C	DC Rated Voltage @ +85°C	ESR @ 100kHz @ +25°C	DCL max			DF Max			Power Dissipation W	Ripple					
							+25°C	+85°C	+125°C	+25°C	+85/125°C	-55°C		25°C	85°C	125°C	25°C	85°C	125°C
							(µA)	(µA)	(µA)	(%)	(%)	(%)		A (100kHz)	A (100kHz)	A (100kHz)	V (100kHz)	V (100kHz)	V (100kHz)
CWR11K*106*0+□	TBJ D 106 * 025 C □ # @ 0 + ++	TBJ D 106 * 025 C □ L @ 9 + ++	D	10	25	1.2	2.5	25	30	6	8	9	0.150	0.35	0.32	0.14	0.42	0.38	0.17
CWR11M*156*0+□	TBJ D 156 * 025 C □ # @ 0 + ++	TBJ D 156 * 025 C □ L @ 9 + ++	D	15	25	1	3.8	38	45.6	6	9	9	0.150	0.39	0.35	0.15	0.39	0.35	0.15
CWR11M*104*0+□	TBJ A 104 * 035 C □ # @ 0 + ++	TBJ A 104 * 035 C □ L @ 9 + ++	A	0.1	35	24	0.5	5	6	4	6	6	0.075	0.06	0.05	0.02	1.34	1.21	0.54
CWR11M*154*0+□	TBJ A 154 * 035 C □ # @ 0 + ++	TBJ A 154 * 035 C □ L @ 9 + ++	A	0.15	35	21	0.5	5	6	4	6	6	0.075	0.06	0.05	0.02	1.25	1.13	0.50
CWR11M*224*0+□	TBJ A 224 * 035 C □ # @ 0 + ++	TBJ A 224 * 035 C □ L @ 9 + ++	A	0.22	35	18	0.5	5	6	4	6	6	0.075	0.06	0.06	0.03	1.16	1.05	0.46
CWR11M*334*0+□	TBJ A 334 * 035 C □ # @ 0 + ++	TBJ A 334 * 035 C □ L @ 9 + ++	A	0.33	35	15	0.5	5	6	4	6	6	0.075	0.07	0.06	0.03	1.06	0.95	0.42
CWR11M*474*0+□	TBJ B 474 * 035 C □ # @ 0 + ++	TBJ B 474 * 035 C □ L @ 9 + ++	B	0.47	35	10	0.5	5	6	4	6	6	0.085	0.09	0.08	0.04	0.92	0.83	0.37
CWR11M*684*0+□	TBJ B 684 * 035 C □ # @ 0 + ++	TBJ B 684 * 035 C □ L @ 9 + ++	B	0.68	35	8	0.5	5	6	4	6	6	0.085	0.10	0.09	0.04	0.82	0.74	0.33
CWR11M*105*0+□	TBJ B 105 * 035 C □ # @ 0 + ++	TBJ B 105 * 035 C □ L @ 9 + ++	B	1	35	6.5	0.5	5	6	4	6	6	0.085	0.11	0.10	0.05	0.74	0.67	0.30
CWR11M*155*0+□	TBJ C 155 * 035 C □ # @ 0 + ++	TBJ C 155 * 035 C □ L @ 9 + ++	C	1.5	35	4.5	0.5	5	6	6	8	9	0.110	0.16	0.14	0.06	0.70	0.63	0.28
CWR11M*225*0+□	TBJ C 225 * 035 C □ # @ 0 + ++	TBJ C 225 * 035 C □ L @ 9 + ++	C	2.2	35	3.5	0.8	8	9.6	6	8	9	0.110	0.18	0.16	0.07	0.62	0.56	0.25
CWR11M*335*0+□	TBJ C 335 * 035 C □ # @ 0 + ++	TBJ C 335 * 035 C □ L @ 9 + ++	C	3.3	35	2.5	1.2	12	14.4	6	8	9	0.110	0.21	0.19	0.08	0.52	0.47	0.21
CWR11M*475*0+□	TBJ D 475 * 035 C □ # @ 0 + ++	TBJ D 475 * 035 C □ L @ 9 + ++	D	4.7	35	1.5	1.7	17	20.4	6	8	9	0.150	0.32	0.28	0.13	0.47	0.43	0.19
CWR11M*685*0+□	TBJ D 685 * 035 C □ # @ 0 + ++	TBJ D 685 * 035 C □ L @ 9 + ++	D	6.8	35	1.3	2.4	24	28.8	6	9	9	0.150	0.34	0.31	0.14	0.44	0.40	0.18
CWR11N*104*0+□	TBJ A 104 * 050 C □ # @ 0 + ++	TBJ A 104 * 050 C □ L @ 9 + ++	A	0.1	50	22	0.5	5	12	6	8	8	0.075	0.06	0.05	0.02	1.28	1.16	0.51
CWR11N*154*0+□	TBJ B 154 * 050 C □ # @ 0 + ++	TBJ B 154 * 050 C □ L @ 9 + ++	B	0.15	50	17	0.5	5	6	4	6	6	0.085	0.07	0.06	0.03	1.20	1.08	0.48
CWR11N*224*0+□	TBJ B 224 * 050 C □ # @ 0 + ++	TBJ B 224 * 050 C □ L @ 9 + ++	B	0.22	50	14	0.5	5	6	4	6	6	0.085	0.08	0.07	0.03	1.09	0.98	0.44
CWR11N*334*0+□	TBJ B 334 * 050 C □ # @ 0 + ++	TBJ B 334 * 050 C □ L @ 9 + ++	B	0.33	50	12	0.5	5	6	4	6	6	0.085	0.08	0.08	0.03	1.01	0.91	0.40
CWR11N*474*0+□	TBJ C 474 * 050 C □ # @ 0 + ++	TBJ C 474 * 050 C □ L @ 9 + ++	C	0.47	50	8	0.5	5	6	4	6	6	0.110	0.12	0.11	0.05	0.94	0.84	0.38
CWR11N*684*0+□	TBJ C 684 * 050 C □ # @ 0 + ++	TBJ C 684 * 050 C □ L @ 9 + ++	C	0.68	50	7	0.5	5	6	4	6	6	0.110	0.13	0.11	0.05	0.88	0.79	0.35
CWR11N*105*0+□	TBJ C 105 * 050 C □ # @ 0 + ++	TBJ C 105 * 050 C □ L @ 9 + ++	C	1	50	6	0.5	5	6	4	6	6	0.110	0.14	0.12	0.05	0.81	0.73	0.32
CWR11N*155*0+□	TBJ D 155 * 050 C □ # @ 0 + ++	TBJ D 155 * 050 C □ L @ 9 + ++	D	1.5	50	4	0.8	8	9.6	6	8	9	0.150	0.19	0.17	0.08	0.77	0.70	0.31
CWR11N*225*0+□	TBJ D 225 * 050 C □ # @ 0 + ++	TBJ D 225 * 050 C □ L @ 9 + ++	D	2.2	50	2.5	1.1	11	13.2	6	8	9	0.150	0.24	0.22	0.10	0.61	0.55	0.24
CWR11N*335*0+□	TBJ D 335 * 050 C □ # @ 0 + ++	TBJ D 335 * 050 C □ L @ 9 + ++	D	3.3	50	2	1.7	17	20.4	6	9	9	0.150	0.27	0.25	0.11	0.55	0.49	0.22
CWR11N*475*0+□	TBJ D 475 * 050 C □ # @ 0 + ++	TBJ D 475 * 050 C □ L @ 9 + ++	D	4.7	50	1.5	2.4	24	28.8	6	9	9	0.150	0.32	0.28	0.13	0.47	0.43	0.19

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.

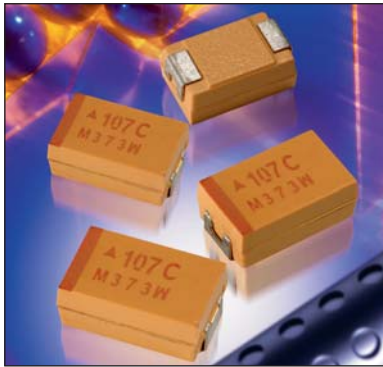
NOTE: AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.



# TBJ Series



## COTS-Plus – DSCC Dwgs 07016 & 95158 Weibull Grade & Space Level



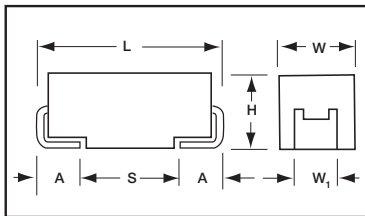
TBJ COTS-Plus series, based on the CWR11 form factor, is a high reliability series encompassing the current range of EIA Low ESR ratings. Qualifications include DSCC 95158 and DSCC 07016, the latter having the widest range of case sizes, capacitance / voltage ratings and also offering Weibull Grade “B” and “C” reliability and all MIL-PRF-55365 surge test options (“A”, “B” & “C”).

For Space Level applications, AVX SRC 9000 qualification is recommended (see

ratings table for part number availability).

There are four termination finishes available: solder plated, fused solder plated, hot solder dipped and gold plated (these correspond to “H”, “K”, “C” and “B” termination, respectively, per MIL-PRF-55365).

The molding compound has been selected to meet the requirements of UL94V-0 (Flame Retardancy) and outgassing requirements of NASA SP-R-0022A.



### MARKING

(Brown marking on gold body)



**Polarity Stripe (+)**  
**Capacitance Code**  
**Rated Voltage**  
**Manufacturer's ID**  
**Lot Number**

### CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	EIA Metric	L±0.20 (0.008)	W+0.20 (0.008) -0.10 (0.004)	H+0.20 (0.008) -0.10 (0.004)	W <sub>1</sub> ±0.20 (0.008)	A+0.30 (0.012) -0.20 (0.008)	S Min.
A	1206	3216-18	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	1210	3528-21	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	2312	6032-28	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	2917	7343-31	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	2917	7343-43	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	2924	7361-38	7.30 (0.287)	6.10 (0.240)	3.45±0.30 (0.136±0.012)	3.10 (0.120)	1.40 (0.055)	4.40 (0.173)

W<sub>1</sub> dimension applies to the termination width for A dimensional area only.

### CAPACITANCE AND RATED VOLTAGE, V<sub>R</sub> (EIA VOLTAGE CODE) RANGE LETTER DENOTES CASE SIZE (ESR LIMITS IN PARENTHESES)

Capacitance		Rated Voltage DC (V <sub>R</sub> ) to 85°C							
µF	Code	4V (G)	6V (J)	10V (A)	16V (C)	20V (D)	25V (E)	35V (V)	50V (T)
0.15	154								A(15000)
0.22	224								A(18000)
0.47	474							A(12000)	A(9500)/B(9500)
0.68	684						A(10000)	A(8000)	A(7900)
1.0	105						A(8000)	A(7500)	A(6600)/B(7000)
1.5	155					A(6500)	A(3000,7500)	A(7500)/B(5200)	C(2000)/D(1500)
2.2	225				A(5500)	A(3000)	A(7000)/B(2000)	B(2000)	D(1200)
3.3	335		A(8000)		A(3500,5000)		B(2000)	B(1000)	D(800)
4.7	475		A(6000)	A(5000)	A(2000)	A(1800,4000) B(1000)	A(3100) B(700,1500)	B(1500) C(600)/D(450)	D(300) E(300)
6.8	685		A(5000)	A(4000)	A(1500)/B(1200)	B(1000)	B(700,2800) C(200)	C(350)/D(400) E(300)	D(300,600) E(400)
10	106		A(4000)	A(1800,3000)	A(3000)/B(900)	B(500,1000) C(700)	C(300,500)	C(1600)/D(125,300) E(250)	E(400)
15	156		A(3500)	A(1000,3200) B(600)	B(500,800)	B(500)/C(450) D(275)	D(275)/E(200)	C(450)/D(100,300) E(250)	E(250)
22	226		A(3000)/B(600)	B(500,700) C(300)	B(600)/C(175,375) B(500)	B(600)/C(400) D(275)	C(275,400) D(100,200)/E(225)	D(400)/D(125) E(125,300)	
33	336	A(3000)	B(600)	A(700)/B(425,650) C(500)	C(100,300) D(250)	C(300) D(100, 200)	D(90,300) E(90,175)	D(200,300) E(300)	
47	476		C(300)	C(200,350) D(200)	C(110,350) D(80,150)	D(100,200) E(150)	D(175,250)	E(250)/V(200)	
68	686	A(1500)	B(500)/C(200) D(175)	C(80,300) D(150)/E(150)	D(150)	D(70,200) E(125,200)	V(95)		
100	107	A(1400) B(900)	C(75,150)	C(75,200) D(50,100)/E(100)	D(50,125) E(100)	V(60)			
150	157		D(125)/E(125)	D(50,100)/E(100)	D(60,150)/V(45)				
220	227		D(50,125) E(100)	D(50,150) E(50,100)	V(50)				
330	337		E(60,150)	D(50,150) E(50,100)/V(40)					
470	477		E(50,200)/V(40)	E(50,200)/V(40)					
1000	108	E(200)							

NOTE: EIA standards for Low ESR solid tantalum capacitors allow an ESR movement of 1.25 times initial limit post mounting.



### HOW TO ORDER

#### COTS-PLUS & DSCC DWG (95158 & 07016):

TBJ	D	686	*	006	C	□	#	@	0	^	++
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% K = ±10% J = ±5%	Voltage Code 004 = 4Vdc 006 = 6Vdc 010 = 10Vdc 015 = 15Vdc 020 = 20Vdc 025 = 25Vdc 035 = 35Vdc 050 = 50Vdc	Standard or Low ESR Range C = Std ESR L = Low ESR	Packaging B = Bulk R = 7" T&R S = 13" T&R W = Waffle  See page 5 for additional packaging options.	Inspection Level S = Std. Conformance L = Group A  D = DSCC DWG	Reliability Grade Weibull: B = 0.1%/1000 hrs. 90% conf. C = 0.01%/1000 hrs. 90% conf. D = 0.001%/1000 hrs. 90% conf. Z = Non-ER	Qualification Level 0 = N/A 9 = SRC9000	Termination Finish H = Solder Plated 0 = Fused Solder Plated 8 = Hot Solder Dipped 9 = Gold Plated 7 = Matte Sn (COTS-Plus only)	Surge Test Option 00 = None 23 = 10 Cycles, +25°C 24 = 10 Cycles, -55°C & +85°C 45 = 10 cycles, -55°C & +85°C before Weibull

#### DSCC DWG P/N CROSS REFERENCE:

<b>07016</b> DSCC DWG 07016	<b>-001</b> Dash Number See Rating Tables	<b>K</b> Capacitance Tolerance K = ±10% M = ±20%	<b>B</b> Reliability Grade B = B Weibull C = C Weibull D = D Weibull	<b>C</b> Termination Finish B = Gold Plated (10 microinch minimum) H = Solder Plated (50 microinch minimum) C = Hot Solder Dip (60 microinch minimum)	<b>A</b> Surge Test Option A = 10 cycles, +25°C B = 10 cycles, -55°C & +85°C C = 10 cycles, -55°C & +85°C before Weibull Z = None required Per MIL-PRF-55365
<b>95158</b> DSCC DWG 95158	<b>-01</b> Dash Number See Rating Tables	<b>K</b> Capacitance Tolerance K = ±10% M = ±20%	<b>H</b> Termination Finish B = Gold Plated (10 microinch minimum) H = Solder Plated (100 microinch minimum)		

#### SPACE LEVEL OPTIONS TO SRC9000\*:

TBJ	D	686	*	006	C	□	L	@	9	^	++
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% K = ±10% J = ±5%	Voltage Code 004 = 4Vdc 006 = 6Vdc 010 = 10Vdc 015 = 15Vdc 020 = 20Vdc 025 = 25Vdc 035 = 35Vdc 050 = 50Vdc	Standard or Low ESR Range C = Std ESR L = Low ESR	Packaging B = Bulk R = 7" T&R S = 13" T&R W = Waffle  See page 5 for additional packaging options.	Inspection Level L = Group A	Reliability Grade Weibull: B = 0.1%/1000 hrs. 90% conf. C = 0.01%/1000 hrs. 90% conf. D = 0.001%/1000 hrs. 90% conf.	Qualification Level 9 = SRC9000	Termination Finish H = Solder Plated 0 = Fused Solder Plated 8 = Hot Solder Dipped 9 = Gold Plated	Surge Test Option 00 = 10 Cycles, -55°C & +85°C 45 = 10 cycles, -55°C & +85°C before Weibull

\*Contact factory for AVX SRC9000 Space Level SCD details.

### TECHNICAL SPECIFICATIONS

Technical Data:	Unless otherwise specified, all technical data relate to an ambient temperature of 25°C									
Capacitance Range:	0.1 μF to 1000 μF									
Capacitance Tolerance:	±5%; ±10%; ±20%									
Rated Voltage: (V <sub>R</sub> )	≤85°C:	4	6	10	16	20	25	35	50	
Category Voltage: (V <sub>C</sub> )	125°C:	2.7	4	7	10	13	17	23	33	
Surge Voltage: (V <sub>S</sub> )	≤85°C:	5.2	8	13	20	26	32	46	65	
	125°C:	3.4	5	8	12	16	20	28	40	
Temperature Range:	-55°C to +125°C									

# TBJ Series

## COTS-Plus – DSCC Dwgs 07016 & 95158 Weibull Grade & Space Level



RATING & PART NUMBER REFERENCE			Parametric Specifications by Rating per DSCC 95158 or 07016 where applicable										Typical Ripple Data by Rating						
DSCC P/N	AVX DSCC & COTS-Plus P/N	AVX SRC9000 P/N	Case	Cap @ 120Hz µF @ 25°C	DC Rated Voltage V @ +85°C	ESR @ 100kHz mOhms @ +25°C	DCL max			DF Max			Power Dissipation W	25°C Ripple		125°C Ripple		85°C Ripple	
							+25°C (µA)	+85°C (µA)	+125°C (µA)	+25°C (%)	+85/125°C (%)	-55°C (%)		A (100kHz)	Ripple (100kHz)	A (100kHz)	Ripple (100kHz)	A (100kHz)	Ripple (100kHz)
07016 001 * @ ^ +	TBJ A 336 * 004 C □ # @ 0 ^ + +		A	33	4	3000	1.4	14	18	6	9	9	0.075	0.16	0.14	0.06	0.47	0.43	0.19
07016 002 * @ ^ +	TBJ A 686 * 004 C □ # @ 0 ^ + +		A	68	4	1500	2.7	27	34	10	12	14	0.075	0.22	0.20	0.09	0.34	0.30	0.13
07016 003 * @ ^ +	TBJ A 107 * 004 C □ # @ 0 ^ + +		A	100	4	1400	4	40	50	30	36	42	0.075	0.23	0.21	0.09	0.32	0.29	0.13
07016 004 * @ ^ +	TBJ B 107 * 004 C □ # @ 0 ^ + +		B	100	4	900	4	40	50	9	10	12	0.085	0.31	0.28	0.12	0.28	0.25	0.11
07016 005 * @ ^ +	TBJ E 108 * 004 C □ # @ 0 ^ + +		E	1,000	4	200	40	400	500	60	90	90	0.165	0.91	0.82	0.36	0.18	0.16	0.07
07016 006 * @ ^ +	TBJ A 335 * 006 C □ # @ 0 ^ + +		A	3.3	6	8000	0.5	5	6	6	9	9	0.075	0.10	0.09	0.04	0.77	0.70	0.31
07016 007 * @ ^ +	TBJ A 475 * 006 C □ # @ 0 ^ + +		A	4.7	6	6000	0.5	5	6	6	9	10	0.075	0.11	0.10	0.04	0.67	0.60	0.27
07016 008 * @ ^ +	TBJ A 685 * 006 C □ # @ 0 ^ + +		A	6.8	6	5000	0.5	5	6	6	9	10	0.075	0.12	0.11	0.05	0.61	0.55	0.24
07016 009 * @ ^ +	TBJ A 106 * 006 C □ # @ 0 ^ + +	TBJ A 106 * 006 C □ L @ 9 ^ + +	A	10	6	4000	1	10	13	6	9	10	0.075	0.14	0.12	0.05	0.55	0.49	0.22
07016 010 * @ ^ +	TBJ A 156 * 006 C □ # @ 0 ^ + +	TBJ A 156 * 006 C □ L @ 9 ^ + +	A	15	6	3500	1	10	13	6	9	10	0.075	0.15	0.13	0.06	0.51	0.46	0.20
07016 011 * @ ^ +	TBJ A 226 * 006 C □ # @ 0 ^ + +	TBJ A 226 * 006 C □ L @ 9 ^ + +	A	22	6	3000	1.4	14	18	6	9	10	0.075	0.16	0.14	0.06	0.47	0.43	0.19
07016 012 * @ ^ +	TBJ B 226 * 006 C □ # @ 0 ^ + +	TBJ B 226 * 006 C □ L @ 9 ^ + +	B	22	6	600	1.4	14	18	6	9	10	0.085	0.38	0.34	0.15	0.23	0.20	0.09
07016 013 * @ ^ +	TBJ B 336 * 006 C □ # @ 0 ^ + +	TBJ B 336 * 006 C □ L @ 9 ^ + +	B	33	6	600	2.1	21	26	6	9	10	0.085	0.38	0.34	0.15	0.23	0.20	0.09
07016 014 * @ ^ +	TBJ C 476 * 006 C □ # @ 0 ^ + +	TBJ C 476 * 006 C □ L @ 9 ^ + +	C	47	6	300	3	30	38	6	9	10	0.110	0.61	0.54	0.24	0.18	0.16	0.07
07016 015 * @ ^ +	TBJ B 686 * 006 C □ # @ 0 ^ + +		B	68	6	500	4.3	43	54	8	10	12	0.085	0.41	0.37	0.16	0.21	0.19	0.08
07016 016 * @ ^ +	TBJ C 686 * 006 C □ # @ 0 ^ + +	TBJ C 686 * 006 C □ L @ 9 ^ + +	C	68	6	200	4.3	43	54	6	9	10	0.110	0.74	0.67	0.30	0.15	0.13	0.06
95158 01 * ^ A	TBJ D 686 * 006 C □ # @ 0 ^ + +		D	68	6	175	3.3	19.8	33	4	6	6	0.150	0.93	0.83	0.37	0.16	0.15	0.06
07016 017 * @ ^ +	TBJ C 107 * 006 C □ # @ 0 ^ + +		C	100	6	150	6.3	63	79	6	9	10	0.110	0.86	0.77	0.34	0.13	0.12	0.05
07016 018 * @ ^ +	TBJ C 107 * 006 L □ # @ 0 ^ + +		C	100	6	75	6.3	63	79	6	9	10	0.110	1.21	1.09	0.48	0.09	0.08	0.04
07016 019 * @ ^ +	TBJ D 157 * 006 C □ # @ 0 ^ + +	TBJ D 157 * 006 C □ L @ 9 ^ + +	D	150	6	125	9.5	95	119	6	9	10	0.150	1.10	0.99	0.44	0.14	0.12	0.05
95158 02 * ^ A	TBJ E 157 * 006 C □ # @ 0 ^ + +		E	150	6	125	7.2	43.2	72	6	8	8	0.165	1.15	1.03	0.46	0.14	0.13	0.06
07016 020 * @ ^ +	TBJ D 227 * 006 C □ # @ 0 ^ + +	TBJ D 227 * 006 C □ L @ 9 ^ + +	D	220	6	125	13.2	132	165	8	10	12	0.150	1.10	0.99	0.44	0.14	0.12	0.05
95158 05 * ^ A	TBJ D 227 * 006 L □ # @ 0 ^ + +		D	220	6	50	13.2	132	165	8	10	12	0.150	1.73	1.56	0.69	0.09	0.08	0.03
95158 03 * ^ A	TBJ E 227 * 006 L □ # @ 0 ^ + +		E	220	6	100	13.2	132	165	8	12	12	0.165	1.28	1.16	0.51	0.13	0.12	0.05
07016 021 * @ ^ +	TBJ E 337 * 006 C □ # @ 0 ^ + +	TBJ E 337 * 006 C □ L @ 9 ^ + +	E	330	6	150	19.8	198	248	8	10	12	0.165	1.05	0.94	0.42	0.18	0.14	0.06
07016 022 * @ ^ +	TBJ E 337 * 006 L □ # @ 0 ^ + +		E	330	6	50	19.8	198	248	8	10	12	0.165	1.82	1.63	0.73	0.09	0.08	0.04
07016 023 M @ ^ +	TBJ E 477 * 006 C □ # @ 0 ^ + +	TBJ E 477 * 006 C □ L @ 9 ^ + +	E	470	6	200	29.6	296	370	10	12	14	0.165	0.91	0.82	0.36	0.18	0.16	0.07
07016 024 M @ ^ +	TBJ E 477 M 006 L □ # @ 0 ^ + +		E	470	6	50	29.6	296	370	10	12	14	0.165	1.82	1.63	0.73	0.09	0.08	0.04
07016 025 * @ ^ +	TBJ V 477 * 006 L □ # @ 0 ^ + +		V	470	6	40	29.6	296	370	10	12	12	0.250	2.50	2.25	1.00	0.10	0.09	0.04
07016 026 * @ ^ +	TBJ A 475 * 010 C □ # @ 0 ^ + +	TBJ A 475 * 010 C □ L @ 9 ^ + +	A	4.7	10	5000	0.5	5	6	6	9	10	0.075	0.12	0.11	0.05	0.61	0.55	0.24
07016 027 * @ ^ +	TBJ A 685 * 010 C □ # @ 0 ^ + +	TBJ A 685 * 010 C □ L @ 9 ^ + +	A	6.8	10	4000	0.7	7	9	6	9	10	0.075	0.14	0.12	0.05	0.55	0.49	0.22
07016 028 * @ ^ +	TBJ A 106 * 010 C □ # @ 0 ^ + +	TBJ A 106 * 010 C □ L @ 9 ^ + +	A	10	10	3000	1	10	13	6	9	10	0.075	0.16	0.14	0.06	0.47	0.43	0.19
07016 029 * @ ^ +	TBJ A 106 * 010 L □ # @ 0 ^ + +	TBJ A 106 * 010 L □ L @ 9 ^ + +	A	10	10	1800	1	10	13	6	9	10	0.075	0.20	0.18	0.08	0.37	0.33	0.15
07016 030 * @ ^ +	TBJ A 156 * 010 C □ # @ 0 ^ + +	TBJ A 156 * 010 C □ L @ 9 ^ + +	A	15	10	3200	1.6	16	20	6	9	10	0.075	0.15	0.14	0.06	0.49	0.44	0.20
07016 031 * @ ^ +	TBJ A 156 * 010 L □ # @ 0 ^ + +	TBJ A 156 * 010 L □ L @ 9 ^ + +	A	15	10	1000	1.6	16	20	6	9	10	0.075	0.27	0.25	0.11	0.27	0.25	0.11
07016 032 * @ ^ +	TBJ B 156 * 010 C □ # @ 0 ^ + +	TBJ B 156 * 010 C □ L @ 9 ^ + +	B	15	10	600	1.6	16	20	6	9	10	0.085	0.38	0.34	0.15	0.23	0.20	0.09
07016 033 * @ ^ +	TBJ B 226 * 010 C □ # @ 0 ^ + +	TBJ B 226 * 010 C □ L @ 9 ^ + +	B	22	10	700	2.2	22	28	6	9	10	0.085	0.35	0.31	0.14	0.24	0.22	0.10
07016 034 * @ ^ +	TBJ B 226 * 010 L □ # @ 0 ^ + +		B	22	10	500	2.2	22	28	6	9	10	0.085	0.41	0.37	0.16	0.21	0.19	0.08
07016 035 * @ ^ +	TBJ C 226 * 010 C □ # @ 0 ^ + +		C	22	10	300	2.2	22	28	6	9	10	0.110	0.61	0.54	0.24	0.18	0.16	0.07
07016 036 * @ ^ +	TBJ A 336 * 010 C □ # @ 0 ^ + +		A	33	10	700	3.3	33	41	8	10	12	0.075	0.33	0.29	0.13	0.23	0.21	0.09
07016 037 * @ ^ +	TBJ B 336 * 010 C □ # @ 0 ^ + +	TBJ B 336 * 010 C □ L @ 9 ^ + +	B	33	10	650	3.3	33	41	6	9	10	0.085	0.36	0.33	0.14	0.24	0.21	0.09
07016 038 * @ ^ +	TBJ B 336 * 010 L □ # @ 0 ^ + +		B	33	10	425	3.3	33	41	6	9	10	0.085	0.45	0.40	0.18	0.19	0.17	0.08
07016 039 * @ ^ +	TBJ C 336 * 010 C □ # @ 0 ^ + +	TBJ C 336 * 010 C □ L @ 9 ^ + +	C	33	10	500	3.3	33	41	6	9	10	0.110	0.47	0.42	0.19	0.23	0.21	0.09
07016 040 * @ ^ +	TBJ C 476 * 010 C □ # @ 0 ^ + +	TBJ C 476 * 010 C □ L @ 9 ^ + +	C	47	10	350	4.7	47	59	6	9	10	0.110	0.56	0.50	0.22	0.20	0.18	0.08
07016 041 * @ ^ +	TBJ C 476 * 010 L □ # @ 0 ^ + +		C	47	10	200	4.7	47	59	6	9	10	0.110	0.74	0.67	0.30	0.15	0.13	0.06
95158 -04 * ^ A	TBJ D 476 * 010 C □ # @ 0 ^ + +		D	47	10	200	3.8	22.8	38	4	6	6	0.150	0.87	0.78	0.35	0.17	0.16	0.07
07016 042 * @ ^ +	TBJ C 686 * 010 C □ # @ 0 ^ + +	TBJ C 686 * 010 C □ L @ 9 ^ + +	C	68	10	300	6.8	68	85	8	10	12	0.110	0.61	0.54	0.24	0.18	0.16	0.07
07016 043 * @ ^ +	TBJ C 686 * 010 L □ # @ 0 ^ + +		C	68	10	80	6.8	68	85	8	10	12	0.110	1.17	1.06	0.47	0.09	0.08	0.04
07016 044 * @ ^ +	TBJ D 686 * 010 C □ # @ 0 ^ + +		D	68	10	150	6.8	68	85	6	9	10	0.150	1.00	0.90	0.40	0.15	0.14	0.06
95158 05 * ^ A	TBJ E 686 * 010 C □ # @ 0 ^ + +		E	68	10	150	5.4	32.4	54	4	6	6	0.165	1.05	0.94	0.42	0.16	0.14	0.06
07016 045 * @ ^ +	TBJ C 107 * 010 C □ # @ 0 ^ + +	TBJ C 107 * 010 C □ L @ 9 ^ + +	C	100	10	200	10	100	125	8	10	12	0.110	0.74	0.67	0.30	0.15	0.13	0.06
07016 046 * @ ^ +	TBJ C 107 * 010 L □ # @ 0 ^ + +		C	100	10	75	10	100	125	8	10	12	0.110	1.21	1.09	0.48	0.09	0.08	0.04
95158 06 * ^ A	TBJ D 107 * 010 C □ # @ 0 ^ + +	TBJ D 107 * 010 C □ L @ 9 ^ + +	D	100	10	100	10	100	125	6	9	10	0.150	1.22	1.10	0.49	0.12	0.11	0.05
07016 047 * @ ^ +	TBJ D 107 * 010 L □ # @ 0 ^ + +		D	100	10	50	10	100	125	6	9	10	0.150	1.73	1.56	0.69	0.09	0.08	0.03
95158 07 * ^ A	TBJ E 107 * 010 C □ # @ 0 ^ + +		E	100	10	100	8	48	80	6	8	8	0.165	1.28	1.16	0.51	0.13	0.12	0.05

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.

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.



# TBJ Series

## COTS-Plus – DSCC Dwgs 07016 & 95158 Weibull Grade & Space Level



RATING & PART NUMBER REFERENCE			Parametric Specifications by Rating per DSCC 95158 or 07016 where applicable										Typical Ripple Data by Rating						
DSCC P/N	AVX DSCC & COTS-Plus P/N	AVX SRC9000 P/N	Case	Cap @ 120Hz µF @ 25°C	DC Rated Voltage V @ +85°C	ESR @ 100kHz mOhms @ +25°C	DCL max			DF Max			Power Dissipation W	Ripple					
							+25°C (µA)	+85°C (µA)	+125°C (µA)	+25°C (%)	+85/125°C (%)	-55°C (%)		25°C A (100kHz)	85°C A (100kHz)	125°C A (100kHz)	25°C V (100kHz)	85°C V (100kHz)	125°C V (100kHz)
95158 26 * ^ A	TBJ D 157 * 010 C □ # @ 0 ^ ++	TBJ D 157 * 010 C □ L @ 9 ^ ++	D	150	10	100	15	150	188	8	10	12	0.150	1.22	1.10	0.49	0.12	0.11	0.05
07016 048 * @ ^ +	TBJ D 157 * 010 L □ # @ 0 ^ ++		E	150	10	50	15	150	188	8	10	12	0.150	1.73	1.56	0.69	0.09	0.08	0.03
95158 08 * ^ A	TBJ E 157 * 010 C □ # @ 0 ^ ++	TBJ E 157 * 010 C □ L @ 9 ^ ++	E	150	10	100	15	150	187.5	8	10	12	0.165	1.28	1.16	0.51	0.13	0.12	0.05
07016 049 * @ ^ +	TBJ D 227 M 010 C □ # @ 0 ^ ++		D	220	10	150	22	220	275	8	10	12	0.150	1.00	0.90	0.40	0.15	0.14	0.06
07016 050 M @ ^ +	TBJ D 227 M 010 L □ # @ 0 ^ ++		D	220	10	50	15	150	188	8	10	12	0.150	1.73	1.56	0.69	0.09	0.08	0.03
95158 28 * ^ A	TBJ E 227 * 010 C □ # @ 0 ^ ++	TBJ E 227 * 010 C □ L @ 9 ^ ++	E	220	10	100	15	150	188	8	10	12	0.165	1.28	1.16	0.51	0.13	0.12	0.05
07016 051 * @ ^ +	TBJ E 227 * 010 L □ # @ 0 ^ ++		E	220	10	50	22	220	275	8	10	12	0.165	1.82	1.63	0.73	0.09	0.08	0.04
07016 052 M @ ^ +	TBJ D 337 M 010 C □ # @ 0 ^ ++		D	330	10	150	33	330	413	8	10	12	0.150	1.00	0.90	0.40	0.15	0.14	0.06
07016 053 M @ ^ +	TBJ D 337 M 010 L □ # @ 0 ^ ++		D	330	10	50	33	330	413	8	10	12	0.150	1.73	1.56	0.69	0.09	0.08	0.03
07016 054 * @ ^ +	TBJ E 337 * 010 C □ # @ 0 ^ ++	TBJ E 337 * 010 C □ L @ 9 ^ ++	E	330	10	100	33	330	413	8	10	12	0.165	1.28	1.16	0.51	0.13	0.12	0.05
07016 055 * @ ^ +	TBJ E 337 * 010 L □ # @ 0 ^ ++		E	330	10	50	33	330	413	8	10	12	0.165	1.82	1.63	0.73	0.09	0.08	0.04
07016 056 * @ ^ +	TBJ V 337 * 010 L □ # @ 0 ^ ++		V	330	10	40	33	330	413	8	10	12	0.250	2.50	2.25	1.00	0.10	0.09	0.04
07016 057 M @ ^ +	TBJ E 477 M 010 C □ # @ 0 ^ ++		E	470	10	200	47	470	588	10	12	14	0.165	0.91	0.82	0.36	0.18	0.16	0.07
07016 058 M @ ^ +	TBJ E 477 M 010 L □ # @ 0 ^ ++		E	470	10	50	47	470	588	10	12	14	0.165	1.82	1.63	0.73	0.09	0.08	0.04
07016 059 * @ ^ +	TBJ V 477 * 010 L □ # @ 0 ^ ++		V	470	10	40	47	470	588	10	12	14	0.250	2.50	2.25	1.00	0.10	0.09	0.04
07016 060 * @ ^ +	TBJ A 225 * 016 C □ # @ 0 ^ ++	TBJ A 225 * 016 C □ L @ 9 ^ ++	A	2.2	16	5500	0.5	5	6	6	9	10	0.075	0.12	0.11	0.05	0.64	0.58	0.26
07016 061 * @ ^ +	TBJ A 335 * 016 C □ # @ 0 ^ ++	TBJ A 335 * 016 C □ L @ 9 ^ ++	A	3.3	16	5000	0.5	5	6	6	9	10	0.075	0.12	0.11	0.05	0.61	0.55	0.24
07016 062 * @ ^ +	TBJ A 335 * 016 L □ # @ 0 ^ ++	TBJ A 335 * 016 L □ L @ 9 ^ ++	A	3.3	16	3500	0.5	5	6	6	9	10	0.075	0.15	0.13	0.06	0.51	0.46	0.20
07016 063 * @ ^ +	TBJ A 475 * 016 C □ # @ 0 ^ ++	TBJ A 475 * 016 C □ L @ 9 ^ ++	A	4.7	16	2000	0.8	8	10	6	9	10	0.075	0.19	0.17	0.08	0.39	0.35	0.15
07016 064 * @ ^ +	TBJ A 685 * 016 C □ # @ 0 ^ ++	TBJ A 685 * 016 C □ L @ 9 ^ ++	A	6.8	16	1500	1.1	11	14	6	9	10	0.075	0.22	0.20	0.09	0.34	0.30	0.13
07016 065 * @ ^ +	TBJ B 685 * 016 C □ # @ 0 ^ ++	TBJ B 685 * 016 C □ L @ 9 ^ ++	B	6.8	16	1200	1.1	11	14	6	9	10	0.085	0.27	0.24	0.11	0.32	0.29	0.13
07016 066 * @ ^ +	TBJ A 106 * 016 C □ # @ 0 ^ ++		A	10	16	3000	1.6	16	20	6	9	10	0.075	0.16	0.14	0.06	0.47	0.43	0.19
07016 068 * @ ^ +	TBJ B 156 * 016 C □ # @ 0 ^ ++	TBJ B 156 * 016 C □ L @ 9 ^ ++	B	15	16	800	2.4	24	30	6	9	10	0.085	0.33	0.29	0.13	0.26	0.23	0.10
07016 069 * @ ^ +	TBJ B 156 * 016 L □ # @ 0 ^ ++		B	15	16	500	2.4	24	30	6	9	10	0.085	0.41	0.37	0.16	0.21	0.19	0.08
07016 070 * @ ^ +	TBJ B 226 * 016 C □ # @ 0 ^ ++	TBJ B 226 * 016 C □ L @ 9 ^ ++	B	22	16	600	3.6	36	45	6	9	10	0.085	0.38	0.34	0.15	0.23	0.20	0.09
07016 071 * @ ^ +	TBJ C 226 * 016 C □ # @ 0 ^ ++	TBJ C 226 * 016 C □ L @ 9 ^ ++	C	22	16	375	3.6	36	45	6	9	10	0.110	0.54	0.49	0.22	0.20	0.18	0.08
07016 072 * @ ^ +	TBJ C 226 * 016 L □ # @ 0 ^ ++		C	22	16	150	3.6	36	45	6	9	10	0.110	0.86	0.77	0.34	0.13	0.12	0.05
07016 073 * @ ^ +	TBJ B 336 * 016 C □ # @ 0 ^ ++		B	22	16	500	3.6	36	45	6	9	10	0.085	0.41	0.37	0.16	0.21	0.19	0.08
07016 074 * @ ^ +	TBJ C 336 * 016 C □ # @ 0 ^ ++	TBJ C 336 * 016 C □ L @ 9 ^ ++	C	33	16	300	5.3	53	66	6	9	10	0.110	0.61	0.54	0.24	0.18	0.16	0.07
07016 075 * @ ^ +	TBJ C 336 * 016 L □ # @ 0 ^ ++		C	33	16	100	5.3	53	66	6	9	10	0.110	1.05	0.94	0.42	0.10	0.09	0.04
95158 09 * ^ A	TBJ D 336 * 016 C □ # @ 0 ^ ++		D	33	16	250	4.2	25.2	42	4	6	6	0.150	0.77	0.70	0.31	0.19	0.17	0.08
07016 076 * @ ^ +	TBJ C 476 * 016 C □ # @ 0 ^ ++	TBJ C 476 * 016 C □ L @ 9 ^ ++	C	47	16	350	7.6	76	95	6	9	10	0.110	0.56	0.50	0.22	0.20	0.18	0.08
07016 077 * @ ^ +	TBJ C 476 * 016 L □ # @ 0 ^ ++		C	47	16	110	7.6	76	95	6	9	10	0.110	1.00	0.90	0.40	0.11	0.10	0.04
07016 078 * @ ^ +	TBJ D 476 * 016 L □ # @ 0 ^ ++		D	47	16	80	7.6	76	95	6	9	10	0.150	1.37	1.23	0.55	0.11	0.10	0.04
95158 10 * ^ A	TBJ D 476 * 016 C □ # @ 0 ^ ++	TBJ D 476 * 016 C □ L @ 9 ^ ++	D	47	16	150	7.5	75	94	6	9	9	0.150	1.00	0.90	0.40	0.15	0.14	0.06
07016 079 * @ ^ +	TBJ D 686 * 016 C □ # @ 0 ^ ++	TBJ D 686 * 016 C □ L @ 9 ^ ++	D	68	16	150	10.9	109	136	6	9	10	0.150	1.00	0.90	0.40	0.15	0.14	0.06
07016 080 * @ ^ +	TBJ D 107 * 016 C □ # @ 0 ^ ++	TBJ D 107 * 016 C □ L @ 9 ^ ++	D	100	16	125	16	160	200	6	9	10	0.150	1.10	0.99	0.44	0.14	0.12	0.05
07016 081 * @ ^ +	TBJ D 107 * 016 L □ # @ 0 ^ ++		D	100	16	50	16	160	200	6	9	10	0.150	1.73	1.56	0.69	0.09	0.08	0.03
95158 11 * ^ A	TBJ E 107 * 016 C □ # @ 0 ^ ++	TBJ E 107 * 016 C □ L @ 9 ^ ++	E	100	16	100	16	160	200	6	9	10	0.165	1.28	1.16	0.51	0.13	0.12	0.05
07016 082 M @ ^ +	TBJ D 157 M 016 C □ # @ 0 ^ ++		D	150	16	150	24	240	300	6	9	10	0.150	1.00	0.90	0.40	0.15	0.14	0.06
07016 083 M @ ^ +	TBJ D 157 M 016 L □ # @ 0 ^ ++		D	150	16	60	24	240	300	6	9	10	0.150	1.58	1.42	0.63	0.09	0.09	0.04
07016 084 * @ ^ +	TBJ V 157 * 016 L □ # @ 0 ^ ++		V	150	16	45	24	480	300	6	8	10	0.250	2.36	2.12	0.94	0.11	0.10	0.04
07016 085 * @ ^ +	TBJ V 227 * 016 L □ # @ 0 ^ ++		V	220	16	50	35.2	352	440	8	10	12	0.250	2.24	2.01	0.89	0.11	0.10	0.04
07016 086 * @ ^ +	TBJ A 155 * 020 C □ # @ 0 ^ ++	TBJ A 155 * 020 C □ L @ 9 ^ ++	A	1.5	20	6500	0.5	5	6	6	8	10	0.075	0.11	0.10	0.04	0.70	0.63	0.28
07016 087 * @ ^ +	TBJ A 225 * 020 C □ # @ 0 ^ ++	TBJ A 225 * 020 C □ L @ 9 ^ ++	A	2.2	20	3000	0.5	5	6	6	8	10	0.075	0.16	0.14	0.06	0.47	0.43	0.19
07016 088 * @ ^ +	TBJ A 475 * 020 C □ # @ 0 ^ ++	TBJ A 475 * 020 C □ L @ 9 ^ ++	A	4.7	20	4000	1	10	13	6	8	10	0.075	0.14	0.12	0.05	0.55	0.49	0.22
07016 089 * @ ^ +	TBJ A 475 * 020 L □ # @ 0 ^ ++	TBJ A 475 * 020 L □ L @ 9 ^ ++	A	4.7	20	1800	1	10	13	6	8	10	0.075	0.20	0.18	0.08	0.37	0.33	0.15
07016 090 * @ ^ +	TBJ B 475 * 020 C □ # @ 0 ^ ++	TBJ B 475 * 020 C □ L @ 9 ^ ++	B	4.7	20	1000	2	20	25	6	8	10	0.085	0.29	0.26	0.12	0.29	0.26	0.12
07016 091 * @ ^ +	TBJ B 685 * 020 C □ # @ 0 ^ ++	TBJ B 685 * 020 C □ L @ 9 ^ ++	B	6.8	20	1000	1.4	14	18	6	8	10	0.085	0.29	0.26	0.12	0.29	0.26	0.12
07016 092 * @ ^ +	TBJ B 106 * 020 C □ # @ 0 ^ ++	TBJ B 106 * 020 C □ L @ 9 ^ ++	B	10	20	1000	0.7	7	9	6	8	10	0.085	0.29	0.26	0.12	0.29	0.26	0.12
07016 093 * @ ^ +	TBJ B 106 * 020 L □ # @ 0 ^ ++		B	10	20	500	0.7	7	9	6	8	10	0.085	0.41	0.37	0.16	0.21	0.19	0.08
07016 094 * @ ^ +	TBJ C 106 * 020 C □ # @ 0 ^ ++	TBJ C 106 * 020 C □ L @ 9 ^ ++	C	10	20	700	1.4	14	18	6	8	10	0.110	0.40	0.36	0.16	0.28	0.25	0.11
07016 095 * @ ^ +	TBJ B 156 * 020 C □ # @ 0 ^ ++	TBJ B 156 * 020 C □ L @ 9 ^ ++	B	15	20	500	3	30	38	6	8	10	0.085	0.41	0.37	0.16	0.21	0.19	0.08
07016 096 * @ ^ +	TBJ C 156 * 020 C □ # @ 0 ^ ++	TBJ C 156 * 020 C □ L @ 9 ^ ++	C	15	20	450	3	30	38	6	8	10	0.110	0.49	0.44	0.20	0.22	0.20	0.09
95158 12 * ^ A	TBJ D																		



# TBJ Series

## COTS-Plus – DSCC Dwgs 07016 & 95158 Weibull Grade & Space Level



RATING & PART NUMBER REFERENCE			Parametric Specifications by Rating per DSCC 95158 or 07016 where applicable										Typical Ripple Data by Rating						
DSCC P/N	AVX DSCC & COTS-Plus P/N	AVX SRC9000 P/N	Case	Cap @ 120Hz µF @ 25°C	DC Rated Voltage V @ +85°C	ESR @ 100kHz mOhms @ +25°C	DCL max			DF Max			Power Dissipation W	25°C Ripple		85°C Ripple		125°C Ripple	
							+25°C (µA)	+85°C (µA)	+125°C (µA)	+25°C (%)	+85/125°C (%)	-55°C (%)		A (100kHz)	Ripple A (100kHz)	A (100kHz)	Ripple V (100kHz)	A (100kHz)	Ripple V (100kHz)
07016 097 * @ +	TBJ B 226 * 020 C □ # @ 0 +		B	22	20	600	4.4	44	55	6	8	10	0.085	0.38	0.34	0.15	0.23	0.20	0.09
07016 098 * @ +	TBJ C 226 * 020 C □ # @ 0 +		C	22	20	400	4.4	44	55	6	8	10	0.110	0.52	0.47	0.21	0.21	0.19	0.08
95158 13 * @ +	TBJ D 226 * 020 C □ # @ 0 +	TBJ C 226 * 020 C □ L @ 9 +	D	22	20	275	3.5	21	35	4	6	6	0.150	0.74	0.66	0.30	0.20	0.18	0.08
07016 099 * @ +	TBJ C 336 * 020 C □ # @ 0 +	TBJ C 336 * 020 C □ L @ 9 +	C	33	20	300	6.6	66	83	6	8	10	0.110	0.61	0.54	0.24	0.18	0.16	0.07
07016 100 * @ +	TBJ D 336 * 020 C □ # @ 0 +	TBJ D 336 * 020 C □ L @ 9 +	D	33	20	200	6.6	66	83	6	8	10	0.150	0.87	0.78	0.35	0.17	0.16	0.07
07016 101 * @ +	TBJ D 336 * 020 L □ # @ 0 +		D	33	20	100	6.6	66	83	6	8	10	0.150	1.22	1.10	0.49	0.12	0.11	0.05
07016 102 * @ +	TBJ D 476 * 020 C □ # @ 0 +	TBJ D 476 * 020 C □ L @ 9 +	D	47	20	200	9.4	94	118	6	8	10	0.150	0.87	0.78	0.35	0.17	0.16	0.07
07016 103 * @ +	TBJ D 476 * 020 L □ # @ 0 +		D	47	20	100	9.4	94	118	6	8	10	0.150	1.22	1.10	0.49	0.12	0.11	0.05
95158 14 * @ +	TBJ E 476 * 020 C □ # @ 0 +		E	47	20	150	7.5	45	75	4	6	6	0.165	1.05	0.94	0.42	0.16	0.14	0.06
07016 104 * @ +	TBJ D 686 * 020 C □ # @ 0 +	TBJ D 686 * 020 C □ L @ 9 +	D	68	20	200	13.6	136	170	6	8	10	0.150	0.87	0.78	0.35	0.17	0.16	0.07
07016 105 * @ +	TBJ D 686 * 020 L □ # @ 0 +		D	68	20	70	13.6	136	170	6	8	10	0.150	1.46	1.32	0.59	0.10	0.09	0.04
07016 106 * @ +	TBJ E 686 * 020 C □ # @ 0 +	TBJ E 686 * 020 C □ L @ 9 +	E	68	20	200	13.6	136	170	6	8	10	0.165	0.91	0.82	0.36	0.18	0.16	0.07
95158 15 * @ +	TBJ E 686 * 020 L □ # @ 0 +		E	68	20	125	13.6	136	170	6	8	9	0.165	1.15	1.03	0.46	0.14	0.13	0.06
07016 107 * @ +	TBJ V 107 * 020 L □ # @ 0 +		V	100	20	60	20	200	250	8	10	12	0.250	2.04	1.84	0.82	0.12	0.11	0.05
07016 108 M @ +	TBJ A 684 M 025 C □ # @ 0 +	TBJ A 684 M 025 C □ L @ 9 +	A	0.7	25	10000	0.5	5	6	4	6	8	0.075	0.09	0.08	0.03	0.87	0.78	0.35
07016 109 * @ +	TBJ A 105 * 025 C □ # @ 0 +	TBJ A 105 * 025 C □ L @ 9 +	A	1.0	25	8000	0.5	5	6	4	6	8	0.075	0.10	0.09	0.04	0.77	0.70	0.31
07016 110 * @ +	TBJ A 155 * 025 C □ # @ 0 +	TBJ A 155 * 025 C □ L @ 9 +	A	1.5	25	7500	0.5	5	6	6	8	10	0.075	0.10	0.09	0.04	0.75	0.68	0.30
07016 111 * @ +	TBJ A 155 * 025 L □ # @ 0 +	TBJ A 155 * 025 L □ L @ 9 +	A	1.5	25	3000	0.5	5	6	6	8	10	0.075	0.16	0.14	0.06	0.47	0.43	0.19
07016 112 * @ +	TBJ A 225 * 025 C □ # @ 0 +	TBJ A 225 * 025 C □ L @ 9 +	A	2.2	25	7000	0.5	5	6	6	8	10	0.075	0.10	0.09	0.04	0.72	0.65	0.29
07016 113 * @ +	TBJ B 225 * 025 C □ # @ 0 +	TBJ B 225 * 025 C □ L @ 9 +	B	2.2	25	2000	0.5	5	6	6	8	10	0.085	0.21	0.19	0.08	0.41	0.37	0.16
07016 114 * @ +	TBJ B 335 * 025 C □ # @ 0 +	TBJ B 335 * 025 C □ L @ 9 +	B	3.3	25	2000	0.5	5	6	6	8	10	0.085	0.21	0.19	0.08	0.41	0.37	0.16
07016 115 * @ +	TBJ A 475 * 025 C □ # @ 0 +		A	4.7	25	3100	1.2	12	15	6	8	10	0.075	0.16	0.14	0.06	0.48	0.43	0.19
07016 116 * @ +	TBJ B 475 * 025 C □ # @ 0 +	TBJ B 475 * 025 C □ L @ 9 +	B	4.7	25	1500	1.2	12	15	6	8	10	0.085	0.24	0.21	0.10	0.36	0.32	0.14
07016 117 * @ +	TBJ B 475 * 025 L □ # @ 0 +		B	4.7	25	700	1.2	12	15	6	8	10	0.085	0.35	0.31	0.14	0.24	0.22	0.10
07016 118 * @ +	TBJ B 685 * 025 C □ # @ 0 +	TBJ B 685 * 025 C □ L @ 9 +	B	6.8	25	2800	1.7	17	21	6	8	10	0.085	0.17	0.16	0.07	0.49	0.44	0.20
07016 119 * @ +	TBJ B 685 * 025 L □ # @ 0 +		B	6.8	25	700	1.7	17	21	6	8	10	0.085	0.35	0.31	0.14	0.24	0.22	0.10
07016 120 * @ +	TBJ C 685 * 025 C □ # @ 0 +	TBJ C 685 * 025 C □ L @ 9 +	C	6.8	25	700	1.7	17	21	6	8	10	0.110	0.40	0.36	0.16	0.28	0.25	0.11
07016 121 * @ +	TBJ C 106 * 025 C □ # @ 0 +	TBJ C 106 * 025 C □ L @ 9 +	C	10	25	500	2.5	25	31	6	8	10	0.110	0.47	0.42	0.19	0.23	0.21	0.09
07016 122 * @ +	TBJ C 106 * 025 L □ # @ 0 +		C	10	25	300	2.5	25	31	6	8	10	0.110	0.61	0.54	0.24	0.18	0.16	0.07
95158 16 * @ +	TBJ D 156 * 025 C □ # @ 0 +	TBJ D 156 * 025 C □ L @ 9 +	D	15	25	275	3.8	38	45.6	6	9	9	0.150	0.74	0.66	0.30	0.20	0.18	0.08
95158 17 * @ +	TBJ E 156 * 025 C □ # @ 0 +		E	15	25	200	3	18	30	4	6	6	0.165	0.91	0.82	0.36	0.18	0.16	0.07
07016 123 * @ +	TBJ C 226 * 025 C □ # @ 0 +		C	22	25	400	5.5	55	69	6	8	10	0.110	0.52	0.47	0.21	0.21	0.19	0.08
07016 124 * @ +	TBJ C 226 * 025 L □ # @ 0 +		C	22	25	275	5.5	55	69	6	8	10	0.110	0.63	0.57	0.25	0.17	0.16	0.07
07016 125 * @ +	TBJ D 226 * 025 C □ # @ 0 +	TBJ D 226 * 025 C □ L @ 9 +	D	22	25	200	5.5	55	69	6	8	10	0.150	0.87	0.78	0.35	0.17	0.16	0.07
07016 126 * @ +	TBJ D 226 * 025 L □ # @ 0 +		D	22	25	100	5.5	55	69	6	8	10	0.150	1.22	1.10	0.49	0.12	0.11	0.05
95158 18 * @ +	TBJ E 226 * 025 L □ # @ 0 +		E	22	25	225	4.4	26.4	44	4	6	6	0.165	0.86	0.77	0.34	0.19	0.17	0.08
07016 127 * @ +	TBJ D 336 * 025 C □ # @ 0 +	TBJ D 336 * 025 C □ L @ 9 +	D	33	25	300	8.3	83	104	6	8	10	0.150	0.71	0.64	0.28	0.21	0.19	0.08
07016 128 * @ +	TBJ D 336 * 025 L □ # @ 0 +		D	33	25	100	8.3	83	104	6	8	10	0.150	1.22	1.10	0.49	0.12	0.11	0.05
95158 19 * @ +	TBJ E 336 * 025 C □ # @ 0 +		E	33	25	175	6.6	39.6	66	4	6	6	0.165	0.97	0.87	0.39	0.17	0.15	0.07
07016 129 * @ +	TBJ E 336 * 025 L □ # @ 0 +		E	33	25	100	8.3	83	104	6	8	10	0.165	1.35	1.22	0.54	0.12	0.11	0.05
07016 130 M @ +	TBJ D 476 M 025 C □ # @ 0 +		D	47	25	250	11.8	118	148	6	8	10	0.150	0.77	0.70	0.31	0.19	0.17	0.08
07016 131 M @ +	TBJ D 476 M 025 L □ # @ 0 +		D	47	25	175	11.8	118	148	6	8	10	0.150	0.93	0.83	0.37	0.16	0.15	0.06
07016 132 * @ +	TBJ V 686 * 025 L □ # @ 0 +		V	68	25	95	17	170	213	8	10	12	0.250	1.62	1.46	0.65	0.15	0.14	0.06
07016 133 M @ +	TBJ A 474 M 035 C □ # @ 0 +	TBJ A 474 M 035 C □ L @ 9 +	A	0.47	35	12000	0.5	5	6	4	6	8	0.075	0.08	0.07	0.03	0.95	0.85	0.38
07016 134 M @ +	TBJ A 684 M 035 C □ # @ 0 +	TBJ A 684 M 035 C □ L @ 9 +	A	0.68	35	8000	0.5	5	6	4	6	8	0.075	0.10	0.09	0.04	0.77	0.70	0.31
07016 135 * @ +	TBJ A 105 * 035 C □ # @ 0 +	TBJ A 105 * 035 C □ L @ 9 +	A	1.0	35	7500	0.5	5	6	4	6	6	0.075	0.10	0.09	0.04	0.75	0.68	0.30
07016 136 * @ +	TBJ A 155 * 035 C □ # @ 0 +	TBJ A 155 * 035 C □ L @ 9 +	A	1.5	35	7500	0.5	5	6	6	8	9	0.075	0.10	0.09	0.04	0.75	0.68	0.30
07016 137 * @ +	TBJ B 155 * 035 C □ # @ 0 +	TBJ B 155 * 035 C □ L @ 9 +	B	1.5	35	5200	0.5	5	6	6	8	9	0.085	0.13	0.12	0.05	0.66	0.60	0.27
07016 138 * @ +	TBJ B 225 * 035 C □ # @ 0 +	TBJ B 225 * 035 C □ L @ 9 +	B	2.2	35	2000	0.8	8	10	6	8	9	0.085	0.21	0.19	0.08	0.41	0.37	0.16
07016 139 * @ +	TBJ B 335 * 035 C □ # @ 0 +	TBJ B 335 * 035 C □ L @ 9 +	B	3.3	35	1000	1.2	12	15	6	8	9	0.085	0.29	0.26	0.12	0.29	0.26	0.12
07016 140 * @ +	TBJ B 475 * 035 C □ # @ 0 +	TBJ B 475 * 035 C □ L @ 9 +	B	4.7	35	1500	1.6	16	20	6	8	9	0.085	0.24	0.21	0.10	0.36	0.32	0.14
95158 29 * @ +	TBJ C 475 * 035 C □ # @ 0 +	TBJ C 475 * 035 C □ L @ 9 +	C	4.7	35	600	1.6	10.2	17	6	8	9	0.110	0.43	0.39	0.17	0.26	0.23	0.10
07016 141 * @ +	TBJ D 475 * 035 L □ # @ 0 +		D	4.7	35	450	1.6	16	20	6	8	9	0.110	0.49	0.44	0.20	0.22	0.20	0.09
07016 142 * @ +	TBJ C 685 * 035 C □ # @ 0 +		C	6.8	35	350	2.4	24	30	6	9	9	0.150	0.65	0.59	0.26	0.23	0.21	0.09
07016 143 * @ +	TBJ D 685 * 035 C □ # @ 0 +		D	6.8	35	400	2.4	24	30	6	9	9	0.165	0.64	0.58	0.26	0.26	0.23	0.10

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.

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.



# TBJ Series

## COTS-Plus – DSCC Dwgs 07016 & 95158 Weibull Grade & Space Level



RATING & PART NUMBER REFERENCE			Parametric Specifications by Rating per DSCC 95158 or 07016 where applicable										Typical Ripple Data by Rating						
DSCC P/N	AVX DSCC & COTS-Plus P/N	AVX SRC9000 P/N	Case	Cap @ 120Hz µF @ 25°C	DC Rated Voltage V @ +85°C	ESR @ 100kHz mOhms @ +25°C	DCL max			DF Max			Power Dissipation W	Ripple					
							+25°C (µA)	+85°C (µA)	+125°C (µA)	+25°C (%)	+85/125°C (%)	-55°C (%)		25°C A (100kHz)	85°C A (100kHz)	125°C A (100kHz)	25°C V (100kHz)	85°C V (100kHz)	125°C V (100kHz)
95158 20 * @ ^ +	TBJ E 685 * 035 C □ # @ 0 ^ + +		E	6.8	35	300	1.9	11.4	19	4	6	6	0.165	0.74	0.67	0.30	0.22	0.20	0.09
07016 144 * @ ^ +	TBJ C 106 * 035 C □ # @ 0 ^ + +	TBJ C 106 * 035 C □ L @ 9 ^ + +	C	10	35	1600	3.5	35	44	6	9	9	0.110	0.26	0.24	0.10	0.42	0.38	0.17
95158 27 * @ ^ +	TBJ D 106 * 035 C □ # @ 0 ^ + +		D	10	35	300	3.5	35	44	4	6	6	0.150	0.71	0.64	0.28	0.21	0.19	0.08
07016 145 * @ ^ +	TBJ D 106 * 035 L □ # @ 0 ^ + +		D	10	35	125	3.5	35	42	6	9	9	0.150	1.10	0.99	0.44	0.14	0.12	0.05
95158 21 * @ ^ +	TBJ E 106 * 035 C □ # @ 0 ^ + +		E	10	35	250	2.8	16.8	28	4	6	6	0.165	0.81	0.73	0.32	0.20	0.18	0.08
07016 146 * @ ^ +	TBJ C 156 * 035 C □ # @ 0 ^ + +		C	15	35	450	5.3	53	66	6	9	9	0.110	0.49	0.44	0.20	0.22	0.20	0.09
07016 147 * @ ^ +	TBJ D 156 * 035 C □ # @ 0 ^ + +	TBJ D 156 * 035 C □ L @ 9 ^ + +	D	15	35	300	5.3	53	66	6	9	9	0.150	0.71	0.64	0.28	0.21	0.19	0.08
07016 148 * @ ^ +	TBJ D 156 * 035 L □ # @ 0 ^ + +		D	15	35	100	5.3	53	66	6	9	9	0.150	1.22	1.10	0.49	0.12	0.11	0.05
95158 22 * @ ^ +	TBJ E 156 * 035 C □ # @ 0 ^ + +		E	15	35	250	5.3	53	65.6	6	9	9	0.165	0.81	0.73	0.32	0.20	0.18	0.08
07016 149 * @ ^ +	TBJ D 226 * 035 C □ # @ 0 ^ + +	TBJ D 226 * 035 C □ L @ 9 ^ + +	D	22	35	400	7.7	77	96	6	9	9	0.150	0.61	0.55	0.24	0.24	0.22	0.10
07016 150 * @ ^ +	TBJ D 226 * 035 L □ # @ 0 ^ + +		D	22	35	125	7.7	77	96	6	9	9	0.150	1.10	0.99	0.44	0.14	0.12	0.05
95158 23 * @ ^ +	TBJ E 226 * 035 C □ # @ 0 ^ + +		E	22	35	300	7.7	77	96	6	9	9	0.165	0.74	0.67	0.30	0.22	0.20	0.09
07016 151 * @ ^ +	TBJ E 226 * 035 L □ # @ 0 ^ + +		E	22	35	125	7.7	77	96	6	9	9	0.165	1.15	1.03	0.46	0.14	0.13	0.06
07016 152 M @ ^ +	TBJ D 336 M 035 C □ # @ 0 ^ + +		D	33	35	300	11.6	116	145	6	9	9	0.150	0.71	0.64	0.28	0.21	0.19	0.08
07016 153 M @ ^ +	TBJ D 336 M 035 L □ # @ 0 ^ + +		D	33	35	200	11.6	116	145	6	9	9	0.150	0.87	0.78	0.35	0.17	0.16	0.07
07016 154 M @ ^ +	TBJ E 336 M 035 L □ # @ 0 ^ + +	TBJ E 336 M 035 L □ L @ 9 ^ + +	E	33	35	300	11.6	116	145	6	9	9	0.165	0.74	0.67	0.30	0.22	0.20	0.09
07016 155 M @ ^ +	TBJ E 476 M 035 L □ # @ 0 ^ + +		E	47	35	250	16.5	165	206	6	9	9	0.165	0.81	0.73	0.32	0.20	0.18	0.08
07016 156 M @ ^ +	TBJ V 476 M 035 L □ # @ 0 ^ + +		V	47	35	200	16.5	165	206	6	9	9	0.250	1.12	1.01	0.45	0.22	0.20	0.09
07016 157 M @ ^ +	TBJ A 154 M 050 C □ # @ 0 ^ + +		A	0.15	50	15000	0.5	5	6	4	6	6	0.075	0.07	0.06	0.03	1.06	0.95	0.42
07016 158 M @ ^ +	TBJ A 224 M 050 C □ # @ 0 ^ + +	TBJ A 224 M 050 C □ L @ 9 ^ + +	A	0.22	50	18000	0.5	5	6	4	6	6	0.075	0.06	0.06	0.03	1.16	1.05	0.46
07016 159 * @ ^ +	TBJ A 474 * 050 C □ # @ 0 ^ + +		A	0.47	50	9500	0.5	5	6	4	6	6	0.075	0.09	0.08	0.04	0.84	0.76	0.34
07016 160 * @ ^ +	TBJ B 474 * 050 C □ # @ 0 ^ + +	TBJ B 474 * 050 C □ L @ 9 ^ + +	B	0.47	50	9500	0.5	5	6	4	6	6	0.085	0.09	0.09	0.04	0.90	0.81	0.36
07016 161 * @ ^ +	TBJ A 684 * 050 C □ # @ 0 ^ + +		A	0.68	50	7900	0.5	5	6	4	6	6	0.075	0.10	0.09	0.04	0.77	0.69	0.31
07016 162 M @ ^ +	TBJ A 105 M 050 C □ # @ 0 ^ + +		A	1.0	50	6600	0.5	5	6	4	6	6	0.075	0.11	0.10	0.04	0.70	0.63	0.28
07016 163 * @ ^ +	TBJ B 105 * 050 C □ # @ 0 ^ + +	TBJ B 105 * 050 C □ L @ 9 ^ + +	B	1.0	50	7000	0.5	5	6	4	6	6	0.085	0.11	0.10	0.04	0.77	0.69	0.31
07016 164 * @ ^ +	TBJ C 155 * 050 L □ # @ 0 ^ + +	TBJ C 155 * 050 L □ L @ 9 ^ + +	C	1.5	50	2000	0.8	8	10	6	8	9	0.110	0.23	0.21	0.09	0.47	0.42	0.19
07016 165 * @ ^ +	TBJ D 155 * 050 L □ # @ 0 ^ + +	TBJ D 155 * 050 L □ L @ 9 ^ + +	D	1.5	50	1500	0.8	8	10	6	8	9	0.150	0.32	0.28	0.13	0.47	0.43	0.19
07016 166 * @ ^ +	TBJ D 225 * 050 L □ # @ 0 ^ + +	TBJ D 225 * 050 L □ L @ 9 ^ + +	D	2.2	50	1200	1.1	11	14	6	8	9	0.150	0.35	0.32	0.14	0.42	0.38	0.17
07016 167 * @ ^ +	TBJ D 335 * 050 L □ # @ 0 ^ + +	TBJ D 335 * 050 L □ L @ 9 ^ + +	D	3.3	50	800	1.7	17	21	6	9	9	0.150	0.43	0.39	0.17	0.35	0.31	0.14
07016 168 * @ ^ +	TBJ D 475 * 050 L □ # @ 0 ^ + +	TBJ D 475 * 050 L □ L @ 9 ^ + +	D	4.7	50	300	2.4	24	30	6	9	9	0.150	0.71	0.64	0.28	0.21	0.19	0.08
95158 24 * @ ^ +	TBJ E 475 * 050 C □ # @ 0 ^ + +		E	4.7	50	300	1.9	11.4	19	4	6	6	0.165	0.74	0.67	0.30	0.22	0.20	0.09
07016 169 * @ ^ +	TBJ D 685 * 050 C □ # @ 0 ^ + +	TBJ D 685 * 050 C □ L @ 9 ^ + +	D	6.8	50	600	3.4	34	43	6	6	6	0.150	0.50	0.45	0.20	0.30	0.27	0.12
07016 170 * @ ^ +	TBJ D 685 * 050 L □ # @ 0 ^ + +		D	6.8	50	300	3.4	34	43	6	6	6	0.150	0.71	0.64	0.28	0.21	0.19	0.08
07016 171 * @ ^ +	TBJ E 685 * 050 C □ # @ 0 ^ + +		E	6.8	50	400	3.4	34	43	6	6	6	0.165	0.64	0.58	0.26	0.26	0.23	0.10

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.

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.

