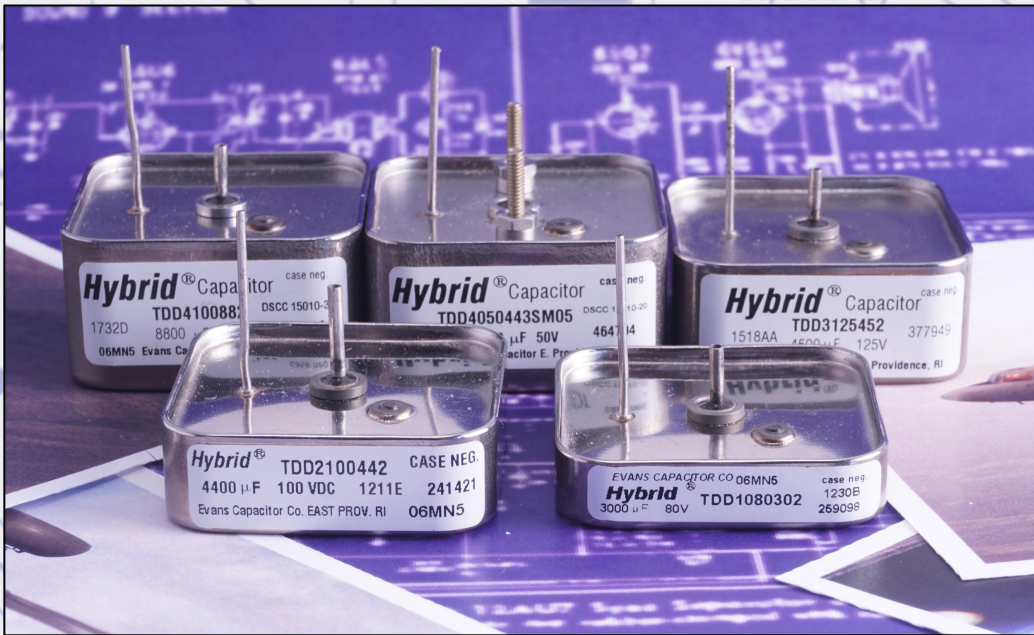




EVANS

CAPACITOR COMPANY



TDD Series Hybrid Capacitors

Product Datasheet

Product Overview

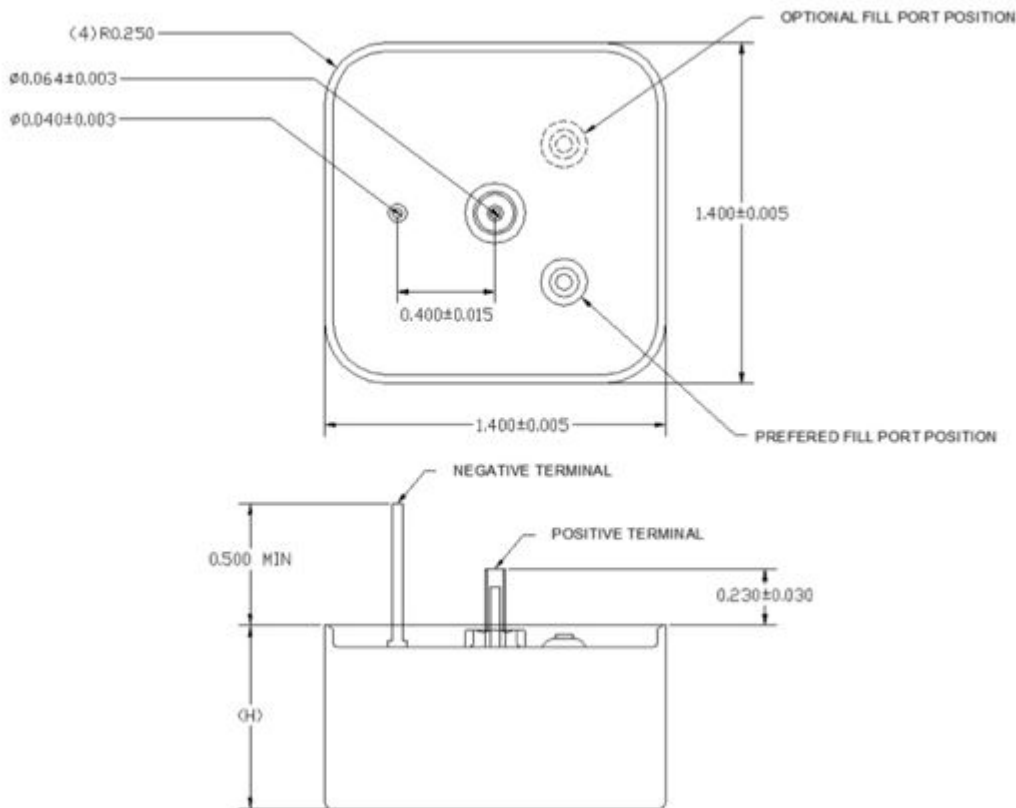
TDD series Hybrid Capacitors utilize a sintered tantalum anode and ruthenium oxide coated cathode operating in aqueous with additive electrolyte. The components are hermetically sealed in a welded tantalum case with a glass-to-metal anode terminal seal.

TDD series Hybrid Capacitor combine high capacitance and low ESR in a fully hermetic tantalum package for High reliability Defense and Aerospace applications where weight and volume are at a premium. Especially suited for high power pulse applications, with excellent heat transfer and low inductance.

Electrical Specifications	
Rated Voltage Range	10VDC to 125VDC
Capacitance Range	1,500uF to 240,000uF
Capacitance Tolerance	+/-10%
Life (@125°C)	>2000 hours @ Rated Voltage
DC Leakage Current	See Page 3

Mechanical Specifications		
Shock	MIL-STD-202 Method 213, Condition G	11ms, 50g
Vibration	MIL-STD-202 Method 204, Condition D MIL-STD-202 Method 214, Condition II, Letter E	12 sweeps/axis, 20g peak 1.5 hours/axis, 19.64g peak
Solderability	Solderable per ANSI J-STD-002	63/37 Sn/Pb coated
Terminal Strength	MIL-STD-202 Method 211, Condition A	Withstands 5lb pull test for 30s

Environmental Specifications		
Operating Temperature Range	-55°C to +85°C or 125°C with voltage derating (see page 3)	
Storage Temperature Range	-62°C to +130°C	
Moisture Resistance	MIL-STD-202 Method 106	6V Polarity
Thermal Shock	MIL-STD-202 Method 107 Condition A	
Altitude	MIL-STD-202 Method 105 Condition D	100,000ft Test
Fungus Resistance	Capacitor materials do not support fungus growth & are not a nutrient to fungus	

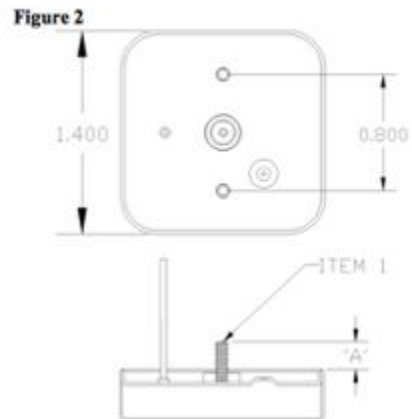


Stud Mounting Options

TABLE 3. OPTIONAL STUD MOUNT

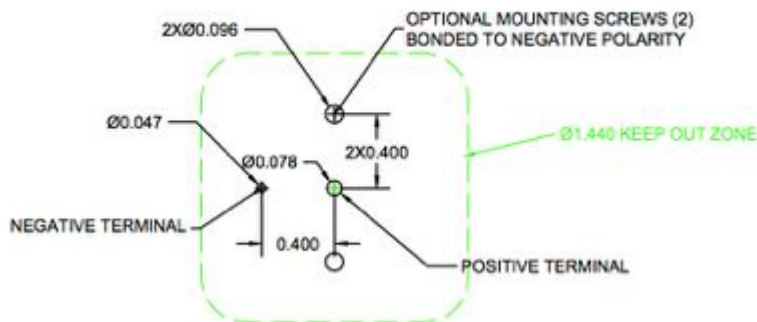
PART NUMBERS	STUD LENGTH (DIM A)
TDD#XXXXXXSM00	0.21 INCH
TDD#XXXXXXSM01	0.27 INCH
TDD#XXXXXXSM02	0.40 INCH
TDD#XXXXXXSM03	0.15 INCH
TDD#XXXXXXSM04	0.18 INCH
TDD#XXXXXXSM05	0.35 INCH

STUDS ARE #2 – 56 CDA 752



PWB Layout

RECOMMENDED PWB LAYOUT WITH MINIMUM PTH DIAMETERS



Ratings Table (Page 1 of 3)

Part Number	DSCC Part Number	Voltage @ 85°C	Voltage @ 125°C	Capacitance (µF) @ 120Hz	ESR (mΩ) max @ 1KHz	Height (H) (in)	Weight (g)	DCL 25°C (max) (µA)	DCL 85°C (max) (mA)
TDD1010 603	15010-01	10	6	60,000	30	0.31	55	150	1.5
TDD2010 124	15010-02	10	6	120,000	20	0.45	80	250	2.0
TDD3010 184	15010-03	10	6	180,000	15	0.60	108	350	2.5
TDD4010 244	15010-04	10	6	240,000	12	0.75	134	450	3.0
TDD1016 403	15010-05	16	9.6	40,000	30	0.31	55	150	1.5
TDD2016 803	15010-06	16	9.6	80,000	20	0.45	80	250	2.0
TDD3016 124	15010-07	16	9.6	120,000	15	0.60	108	350	2.5
TDD4016 164	15010-08	16	9.6	160,000	12	0.75	138	450	3.0
TDD1025 243	15010-09	25	15	24,000	30	0.31	55	150	1.5
TDD2025 483	15010-10	25	15	48,000	20	0.45	80	250	2.0
TDD3025 723	15010-11	25	15	72,000	15	0.60	108	350	2.5
TDD4025 963	15010-12	25	15	96,000	12	0.75	135	450	3.0
TDD1035 163	15010-13	35	21	16,000	40	0.31	55	150	1.6

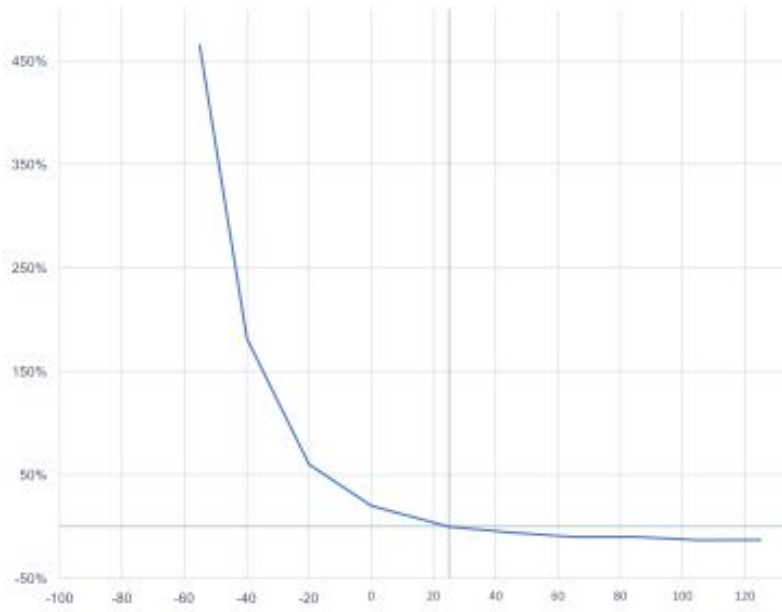
Ratings Table (Page 2 of 3)

Part Number	DSCC Part Number	Voltage @ 85°C	Voltage @ 125°C	Capacitance (µF) @ 120Hz	ESR (mΩ) max @ 1KHz	Height (H) (in)	Weight (g)	DCL 25°C (max) (µA)	DCL 85°C (max) (mA)
TDD2035 323	15010-14	35	21	32,000	20	0.45	80	250	2.0
TDD3035 483	15010-15	35	21	48,000	15	0.60	108	350	2.5
TDD4035 643	15010-16	35	21	64,000	12	0.72	138	450	3.0
TDD1050 113	15010-17	50	30	11,000	50	0.31	55	100	1.0
TDD2050 223	15010-18	50	30	22,000	25	0.45	80	100	1.5
TDD3050 333	15010-19	50	30	33,000	17	0.60	108	200	2.0
TDD4050 443	15010-20	50	30	44,000	15	0.75	134	250	2.5
TDD1063 472	15010-21	63	38	4,700	50	0.31	60	100	1.0
TDD2063 942	15010-22	63	38	10,000	25	0.45	86	100	1.5
TDD3063 143	15010-23	63	38	14,000	17	0.60	115	200	2.0
TDD4063 183	15010-24	63	38	18,000	15	0.75	145	250	2.5
TDD1080 302	15010-25	80	48	3,000	55	0.31	60	100	1.0
TDD2080 602	15010-26	80	48	6,000	27	0.45	86	100	1.5
TDD3080 902	15010-27	80	48	9,000	17	0.60	115	200	2.0

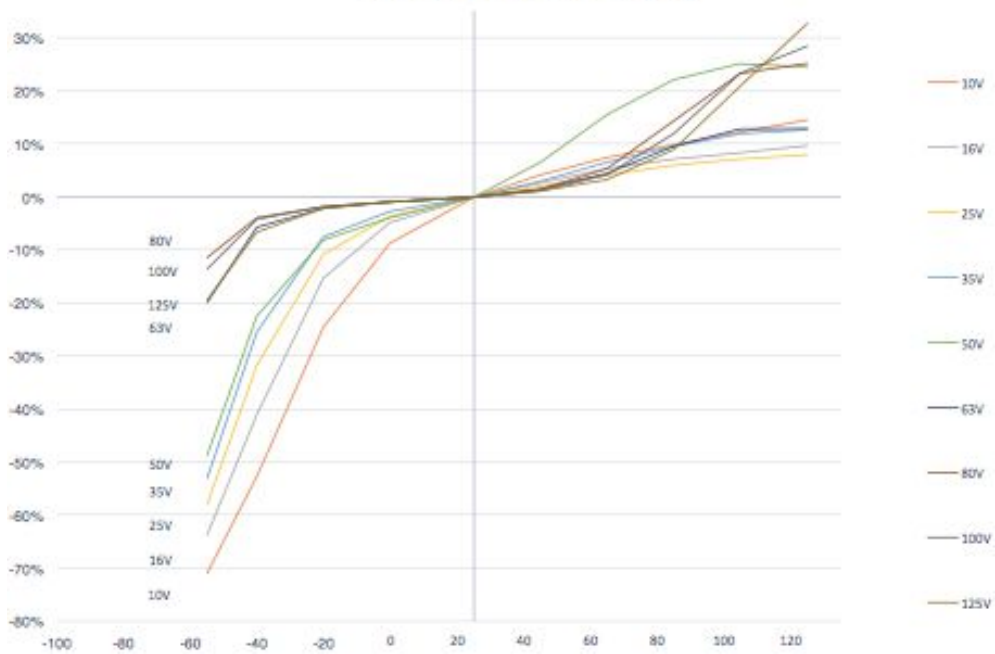
Ratings Table (Page 3 of 3)

Part Number	DSCC Part Number	Voltage @ 85°C	Voltage @ 125°C	Capacitance (µF) @ 120Hz	ESR (mΩ) max @ 1KHz	Height (H) (in)	Weight (g)	DCL 25°C (max) (µA)	DCL 85°C (max) (mA)
TDD4080 123	15010-28	80	48	12,000	15	0.75	145	250	2.5
TDD1100 222	15010-29	100	60	2,200	65	0.31	60	100	1.0
TDD2100 442	15010-30	100	60	4,400	30	0.45	86	100	1.5
TDD3100 662	15010-31	100	60	6,600	20	0.60	115	200	2.0
TDD4100 882	15010-32	100	60	8,800	15	0.75	145	250	2.5
TDD1125 152	15010-33	125	75	1,500	100	0.31	60	100	1.0
TDD2125 302	15010-34	125	75	3,000	50	0.45	90	100	1.5
TDD3125 452	15010-35	125	75	4,500	35	0.60	122	200	2.0
TDD4125 602	15010-36	125	75	6,000	25	0.75	155	250	2.5

TDD ESR Change vs Temperature
% of nominal room temp value



TDD Capacitance Change vs Temperature
% of nominal room temp value



Performance Curves

TDD Temperature vs Life

TDD Temperature vs Voltage

TDD Temp Rise vs Ripple

Phase Angle vs Frequency

Capacitance vs Frequency

Impedance vs Frequency

ESR vs Frequency

Energy Density Plot

3D Models for Website