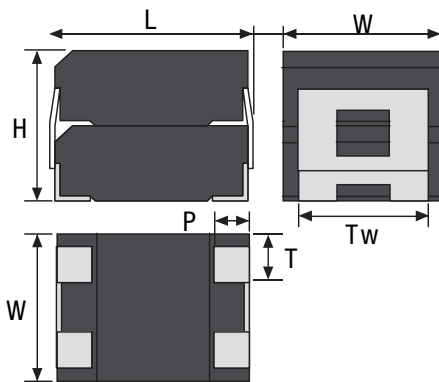


MOLDED CASES SMD – SURFACE MOUNT SN-PB OR SN PLATED – POLARIZED TYPES



DIMENSIONS (in mm)

Case code	L -0.1 +0.5	W -0.1 +0.5	H -0.1 +0.5	P -0.3 +0.3	Tw -0.3 +0.3	T -0.3 +0.3
C	12	9	9.5	1.5	7	2
D	12	12.5	11.5	1.5	10.5	3



MARKING, PACKAGING, CONSTRUCTION: see general characteristics

ELECTRICAL AND ENVIRONMENTAL CHARACTERISTICS

	DCTC42	DCTC42E
Operating temp.	-55°C +125°C	-55°C +125°C
Humidity	56 days	56 days
Capacitance range	12 µF - 680 µF	22 µF - 1500 µF
Tolerance	20%...10%	20%...10%
Voltage range	6.3 V...63 V	6.3 V...80 V
High surge current	1 million cycles	1 million cycles
MAXIMUM CAPACITANCE CHANGE		
-55°C	-10%	-10%
+85°C	+8%	+8%
+125°C	+12%	+12%
MAXIMUM DF (1kHz)		
+20°C	see table	see table
-55°C	= 2.0 x lim 20°C	= 2.0 x lim 20°C
+85°C	= 1.5 x lim 20°C	= 1.5 x lim 20°C
+125°C	= 1.5 x lim 20°C	= 1.5 x lim 20°C
MAXIMUM LEAKAGE CURRENT		
+20°C	see table	see table
+85°C	see table	see table
+125°C	see table	see table
MAXIMUM ESR		
+20°C (500kHz)	see table	see table
MAXIMUM RIPPLE CURRENT		
+20°C (1kHz)	see table	see table
+20°C (100kHz)	see table	see table
MAXIMUM REVERSE VOLTAGE		
+20°C	10% U _R	10% U _R
+85°C	5% U _R	5% U _R
+125°C	1% U _R	1% U _R
MAXIMUM SURGE VOLTAGE		
+85°C	1.3 x U _R	1.3 x U _R
+125°C	1.3 x U _C	1.3 x U _C

MOLDED CASES SMD – SURFACE MOUNT SN-PB OR SN PLATED – POLARIZED TYPES

STANDARD RATINGS – ELECTRICAL CHARACTERISTICS

		DCTC42						
Capacitance 1kHz +20°C (µF)	Case Code	Maximum Leakage Current			Max. DF 1kHz +20°C (%)	Max. ESR 500kHz +20°C (mΩ)	Maximum I rms	
		+20°C (µA)	+85°C (µA)	+125°C (µA)			1kHz +20°C (A)	500kHz +20°C (A)
RATED VOLTAGE (+85°C) 6.3 V - CATEGORY VOLTAGE (+125°C) 4 V								
270	C	17.0	170	212	8	25	5.0	6.4
330	C	20.8	208	260	10	25	5.6	6.6
560	D	35.3	353	441	10	25	6.8	8.2
680	D	42.8	428	535	12	25	7.6	8.6
RATED VOLTAGE (+85°C) 10 V - CATEGORY VOLTAGE (+125°C) 6.3 V								
160	C	16	160	200	8	25	3.6	5.8
220	C	22	220	275	8	25	4.4	6.0
390	D	39	390	487	8	25	6.8	7.4
470	D	47	470	587	10	25	6.8	7.8
RATED VOLTAGE (+85°C) 16 V - CATEGORY VOLTAGE (+125°C) 10 V								
120	C	19.2	192	240	6	35	3.6	5.2
150	C	24.0	240	300	6	30	4.4	5.4
270	D	43.2	432	540	8	25	5.6	7.0
330	D	52.8	528	660	8	25	6.2	7.2
RATED VOLTAGE (+85°C) 20 V - CATEGORY VOLTAGE (+125°C) 13 V								
82	C	16.4	164	205	5	35	3.4	4.8
100	C	20	200	250	6	35	3.6	5.0
180	D	36	360	450	6	25	5.0	6.2
220	D	44	440	550	8	25	5.0	6.6
RATED VOLTAGE (+85°C) 25 V - CATEGORY VOLTAGE (+125°C) 16 V								
56	C	14	140	175	4	40	2.4	4.4
68	C	17	170	212	5	40	2.8	4.6
120	D	30	300	375	6	30	4.4	5.8
150	D	37.5	375	469	6	30	4.8	6.0
RATED VOLTAGE (+85°C) 40 V - CATEGORY VOLTAGE (+125°C) 25 V								
47	C	18.8	188	235	4	45	3.0	4.2
68	D	27.2	272	340	5	35	3.8	5.0
100	D	40	400	500	5	30	4.4	5.4
RATED VOLTAGE (+85°C) 50 V - CATEGORY VOLTAGE (+125°C) 32 V								
33	C	16.5	165	206	3	50	2.8	3.8
39	C	19.5	195	244	4	45	2.8	4.0
47	D	23.5	235	294	4	45	3.4	4.6
RATED VOLTAGE (+85°C) 63 V - CATEGORY VOLTAGE (+125°C) 40 V								
12	C	7.6	76	94	3	80	1.2	3.0
15	C	9.5	95	118	3	70	1.4	3.2
18	C	11.3	113	142	3	65	1.8	3.2
22	C	13.9	139	173	3	60	2.2	3.4
39	D	24.6	246	307	4	45	3.0	4.2
47	D	29.6	296	370	4	45	3.4	4.6

Notes: See notes of DCTC21.

PACKING

Standard: Bulk

STANDARD RATINGS – ELECTRICAL CHARACTERISTICS (EXTENDED RANGE)

		DCTC42E						
Capacitance 1kHz +20°C (μF)	Case Code	Maximum Leakage Current			Max. DF 1kHz +20°C (%)	Max. ESR 500kHz +20°C (mΩ)	Maximum I rms	
		+20°C (μA)	+85°C (μA)	+125°C (μA)			1kHz +20°C (A)	500kHz +20°C (A)
RATED VOLTAGE (+85°C) 6.3 V - CATEGORY VOLTAGE (+125°C) 4 V								
560	C	35.3	353	441	16	30	4.0	5.8
680	C	42.8	428	535	20	30	4.0	5.8
1200	D	75.6	756	945	24	25	5.0	7.2
1500	D	94.5	945	1181	30	25	5.0	7.2
RATED VOLTAGE (+85°C) 10 V - CATEGORY VOLTAGE (+125°C) 6.3 V								
390	C	39	390	487	12	30	3.8	5.4
470	C	47	470	587	12	30	4.0	5.8
820	D	82	820	1025	20	25	5.0	7.2
1000	D	100	1000	1250	22	25	5.0	7.2
RATED VOLTAGE (+85°C) 16 V - CATEGORY VOLTAGE (+125°C) 10 V								
270	C	43.2	432	540	10	30	3.6	5.2
330	C	52.8	528	660	12	25	4.0	5.8
560	D	89.6	896	1120	16	25	4.6	7.0
680	D	109.0	1088	1360	20	25	5.0	7.2
RATED VOLTAGE (+85°C) 20 V - CATEGORY VOLTAGE (+125°C) 13 V								
180	C	36	360	450	6	35	3.4	4.8
220	C	44	440	550	8	35	3.4	5.0
390	D	78	780	975	12	30	4.2	6.0
470	D	94	940	1175	12	30	4.4	6.2
RATED VOLTAGE (+85°C) 25 V - CATEGORY VOLTAGE (+125°C) 16 V								
82	C	20.5	205	256	5	50	2.8	4.0
100	C	25	250	312	6	45	3.0	4.2
180	D	45	450	562	6	35	3.6	5.2
220	D	55	550	687	8	35	3.8	5.4
RATED VOLTAGE (+85°C) 40 V - CATEGORY VOLTAGE (+125°C) 25 V								
68	C	27.2	272	340	5	50	2.6	3.8
120	D	48	480	600	6	40	3.2	4.6
150	D	60	600	750	6	40	3.4	4.8
RATED VOLTAGE (+85°C) 50 V - CATEGORY VOLTAGE (+125°C) 32 V								
47	C	23.5	235	294	5	65	2.4	3.4
100	D	50	500	625	6	45	3.2	4.6
RATED VOLTAGE (+85°C) 63 V - CATEGORY VOLTAGE (+125°C) 40 V								
27	C	17.0	170	213	5	80	2.2	3.0
33	C	20.8	208	260	5	75	2.2	3.2
68	D	42.8	428	535	5	50	3.0	4.2
RATED VOLTAGE (+85°C) 80 V - CATEGORY VOLTAGE (+125°C) 50 V								
22	C	22	220	275	5	90	2.0	2.8
47	D	47	470	587	5	70	2.6	3.8