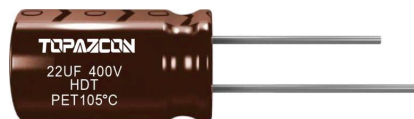


HDT Series

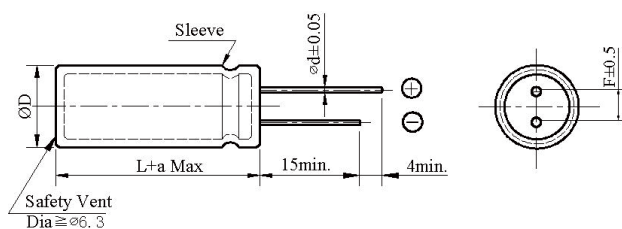
- Miniaturized, designed for fast charging
- Load life 4,000~5,000 hours at 105°C; 2,000~2,500 hours at 115°C
- Low impedance and high ripple current
- RoHS Compliant



SPECIFICATIONS

Item	Performance Characteristics															
Category Temperature Range	-40 ~ +105℃															
Working Voltage Range	400 ~ 500Vdc															
Capacitance Range	1 ~ 100μF															
Capacitance Tolerance	±20% (at 20℃ and 120Hz)															
Dissipation Factor (tanδ) (at 20℃, 120Hz)	<table><tr><td>Rated Voltage (V)</td><td>400</td><td>420</td><td>450</td><td>500</td></tr><tr><td>tanδ(Max)</td><td>0.15</td><td>0.15</td><td>0.18</td><td>0.20</td></tr></table>					Rated Voltage (V)	400	420	450	500	tanδ(Max)	0.15	0.15	0.18	0.20	
Rated Voltage (V)	400	420	450	500												
tanδ(Max)	0.15	0.15	0.18	0.20												
Leakage Current	400~500Vdc															
	I≤0.015CV+ 10μA (2minutes)															
	I: Leakage current (μA) C: Rated capacitance (μF) V: Rated voltage (V)															
Low Temperature Characteristics Impedance Ratio(MAX)	Rated Voltage (V)	400	420	450	500											
	Z(-25℃)/Z(+20℃)	4	4	5	6											
	Z(-40℃)/Z(+20℃)	6	6	8	8											
	(at 120Hz)															
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied for 4,000 to 5,000 hours at 105℃.															
	Capacitance change		≒ ±20% of the initial value		<table><tr><td rowspan="2">Size</td><td colspan="2">Life time (hours)</td></tr><tr><td>105℃</td><td>115℃</td></tr><tr><td>≦6.3 Φ</td><td>4,000</td><td>2,000</td></tr><tr><td>≧8 Φ</td><td>5,000</td><td>2,500</td></tr></table>	Size	Life time (hours)		105℃	115℃	≦6.3 Φ	4,000	2,000	≧8 Φ	5,000	2,500
	Size	Life time (hours)														
		105℃	115℃													
≦6.3 Φ	4,000	2,000														
≧8 Φ	5,000	2,500														
Dissipation factor(tanδ)		≒ 200% of the specified value														
Leakage current		≒ specified value														
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 20℃ after the rated voltage applied for 1,000 hours at 105℃ without voltage applied.															
	Capacitance change		≒ ±20% of the initial value													
	Dissipation factor(tanδ)		≒ 200% of the specified value													
	Leakage current		≒ 200% of the specified value													

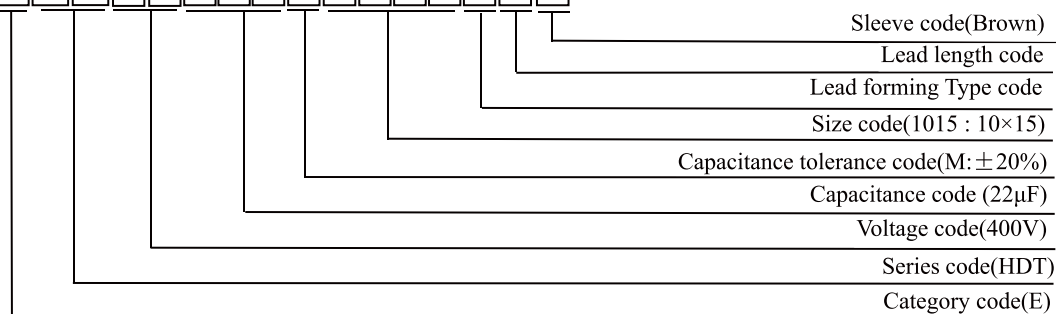
DIMENSIONS (mm)



ΦD	6.3	8	10	12.5	16	18
Φd	0.5	0.5/0.6	0.6	0.6	0.8	0.8
F	2.5	3.5	5.0	5.0	7.5	7.5
a	$L \geq 20mm + 2.0Max$ $L < 20mm + 1.0Max$					

PART NUMBER SYSTEM(Example : 400V 22μF)

E H T 2 G 2 2 0 M 1 0 1 5 0 0 C



HDT Series

◆ Case size & Permissible rated ripple current: (mA rms) at 105°C / 100KHz; Impedance: (Ω) at 20°C / 100KHz

μF \ Vdc	400			420		
	$\Phi\text{D} \times \text{L}$	Z	RC	$\Phi\text{D} \times \text{L}$	Z	RC
1	6.3×9	28.50	57	6.3×9	28.30	59
2.2	6.3×9	15.80	73	6.3×9	15.50	71
3.3	6.3×10	10.30	85	6.3×11	10.00	84
4.7	8×10	8.40	105	8×10	8.20	104
6.8	8×12	6.10	142	8×12	7.30	140
8.2	8×12	5.40	158	8×12	5.20	157
10	8×12	4.20	190	8×13	4.00	189
12	10×13	3.80	215	10×13	3.50	213
15	10×13	3.20	243	10×13	3.10	241
18	10×13	3.10	243	10×15	3.00	241
22	10×15	3.00	284	10×16	2.95	330
33	10×20	1.78	527	12.5×20	1.75	752
47	12.5×25	1.26	753	12.5×25	1.23	752
68	16×25	1.08	972	16×25	1.05	970
82	18×25	0.90	1077	18×25	0.90	1076
100	18×25	0.90	1094	18×25	0.90	1090

μF \ Vdc	450			500		
	$\Phi\text{D} \times \text{L}$	Z	RC	$\Phi\text{D} \times \text{L}$	Z	RC
1	6.3×9	43.30	68	6.3×9	52.00	45
2.2	6.3×9	24.00	81	6.3×12	28.80	63
3.3	6.3×12	15.70	108	6.3×14	18.80	68
4.7	8×10	12.80	126	8×12	15.30	81
6.8	8×13	9.25	158	10×12	11.13	108
8.2	8×15	8.21	189	10×13	9.85	135
10	10×12	6.38	212	10×13	7.66	194
12	10×13	6.08	234	10×15	7.30	207
15	10×15	5.78	279	10×17	6.78	225
18	10×16	5.48	306	12.5×16	5.65	297
22	12.5×16	4.56	360	12.5×20	5.47	369
33	12.5×20	2.71	567	12.5×25	3.25	450
47	16×20	1.92	824	16×25	2.30	621
68	16×25	1.64	1071	18×25	1.97	842
82	18×25	1.37	1112			

◆ RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Cap(μF)	Frequency (Hz)				
	50	120	1K	10K	100K
1 ~ 8.2	0.26	0.40	0.70	0.90	1.00
10 ~ 82	0.41	0.55	0.83	0.94	1.00
≥100	0.54	0.67	0.87	0.96	1.00