

# VTD

## 特点 Features

- 保证135°C 2000小时。Endurance 2000h at 135°C.
- 额定电压范围：10~50V。Rated Voltage Range:10~50V.
- 超高温、低阻抗品。Ultrahigh temp, LOW ESR Type.
- 满足RoHS。RoHS Compliant.
- 满足AEC-Q200认证。AEC-Q200 Compliant.

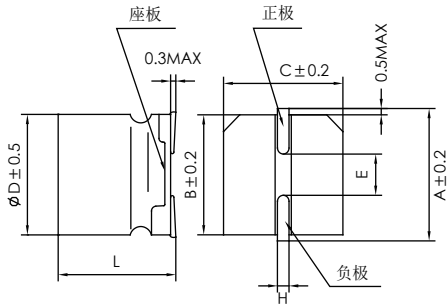


## 主要技术性能 Specifications

项目 Items	特性 Performance Characteristics						
类别温度范围 Category Temperature Range	-40°C ~ +135°C						
额定电压范围 Rated Voltage(U <sub>R</sub> )	10 ~ 50V						
标称容量范围 Nominal Capacitance Range(C <sub>R</sub> )	47 ~ 3300µF					120Hz, +20°C	
标称容量允许偏差 Allowed Capacitance Tolerance(C <sub>T</sub> )	±20%(M)					120Hz, +20°C	
漏电流 Leakage Current(I <sub>L</sub> )	≤0.03C <sub>R</sub> U <sub>R</sub> 或者4µA 取较大值 (Whichever is greater)					+20°C After 2 minutes	
损耗角正切值 Tangent of loss angle(Tanδ)	U <sub>R</sub> (V)	10	16	25	35	50	Max. 120Hz, +20°C
	Tanδ	0.30	0.23	0.18	0.16	0.16	
低温特性 Characteristics at Low Temperature	U <sub>R</sub> (V)	10	16	25	35	50	Max. 120Hz
	Z <sub>-40°C</sub> / Z <sub>+20°C</sub>	12	8	6	4	4	
耐久性 Load Life	+135°C, 连续施加额定电压2000小时, 恢复16小时后: After applying rated voltage for 2000 hours at 135°C and then recovery 16 hours:						
	容量变化率 Capacitance Change	±30%初始值以内 Within ±30% of the initial value					
	损耗角正切值 Tanδ	≤ 300%初始规定值 Not more than 300% of specified value					
高温贮存 Shelf Life	+135°C, 1000小时贮存后, 恢复16小时后: After storage for 1000 hours at +135°C and then recovery 16 hours:						
	容量变化率 Capacitance Change	±30%初始值以内 Within ±30% of the initial value					
	损耗角正切值 Tanδ	≤ 300%初始规定值 Not more than 200% of specified value					
耐焊接热 Resistance to Soldering Heat	在250°C的条件下, 电容器在热板上保持30秒, 然后从热板上取出电容器, 让其在室温下恢复, 电容器应满足以下要求: The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the following requirement.						
	容量变化率 Capacitance Change	±10%初始值以内 Within ±10% of the initial value					
	损耗角正切值 Tanδ	≤初始规定值 Not more than specified value					
漏电流 Leakage Current	≤ 初始规定值 Not more than specified value						

尺寸图 Dimensional drawings

Fig.1



Marking  
 $\phi D=8 \sim 10.2mm$

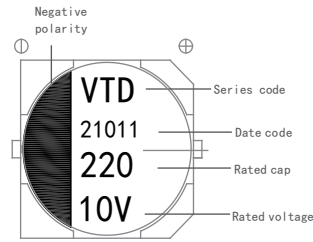
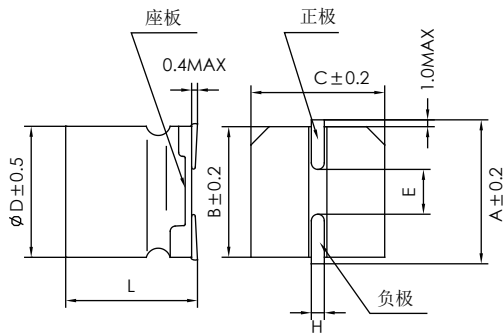
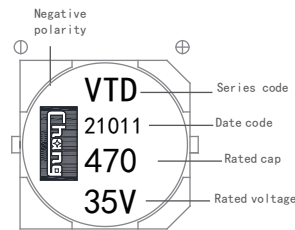


Fig.2



$\phi D \geq 12.5mm$



尺寸表 size table

单位 Unit: mm

$\phi D$	L	A	B	C	$E \pm 0.2$	H	Fig.No.
8/8.2	$10.5 \pm 0.5$	9.0	8.3	8.3	3.1	0.8 ~ 1.1	1
10	$10.5 \pm 0.5$	11.0	10.3	10.3	4.5		
12.5	$13.5 \pm 0.5$	13.6	13	13	4.5	1.1 ~ 1.4	2
12.5	$16 \pm 0.5$	13.6	13	13	4.5		
16	$16.5 \pm 0.5$	18.0	17	17	6.4		
16	$21.5 \pm 0.5$	18.0	17	17	6.4		
18	$16.5 \pm 0.5$	20.0	19	19	6.4		
18	$21.5 \pm 0.5$	20.0	19	19	6.4		

规格特性表  
Table of specifications and characteristics

U <sub>R</sub> (V) C <sub>R</sub> (μF)	10V			16V			25V			35V			50V		
	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 135°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 135°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 135°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 135°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 135°C mA	ESR <sub>max</sub> 100KHz 25°C Ω
47										8.2*10.5	270	0.20	8.2*10.5	270	0.30
68										8.2*10.5	270	0.20			
100				8.2*10.5	270	0.20	8.2*10.5	270	0.20	8.2*10.5	270	0.20	10*10.5	500	0.25
220	8.2*10.5	270	0.20	8.2*10.5	270	0.20	10*10.5	500	0.15	10*10.5	500	0.15			
330	8.2*10.5	270	0.20	10*10.5	500	0.15	10*10.5	500	0.15						
	10*10.5	500	0.15												
470	10*10.5	500	0.15	10*10.5	500	0.15				12.5*13.5	750	0.08	16*16.5	1000	0.075
560										12.5*13.5	750	0.08	16*16.5	1000	0.075
680										16*16.5	1200	0.06	18*16.5	1200	0.075
820							12.5*13.5	750	0.08	16*16.5	1200	0.06	18*16.5	1200	0.075
1000							12.5*13.5	750	0.08	16*16.5	1200	0.06	16*21.5	1600	0.06
1200							16*16.5	1200	0.06	18*16.5	1400	0.05	18*21.5	1900	0.04
1500							16*16.5	1200	0.06	16*21.5	1900	0.04			
						18*16.5				1400	0.05				
1800							16*16.5	1200	0.06	18*21.5	2200	0.035			
2200							18*16.5	1400	0.05	18*21.5	2200	0.035			
2700							16*21.5	1900	0.04						
3300							18*21.5	2200	0.035						

额定纹波电流的频率系数  
Frequency coefficient of ripple current

Frequency (Hz)	50	120	1K	≥ 10K
Coefficient (kf)	0.35	0.50	0.83	1.00