

系列:VD

产品特点

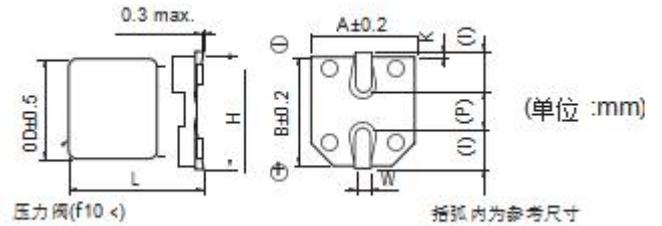
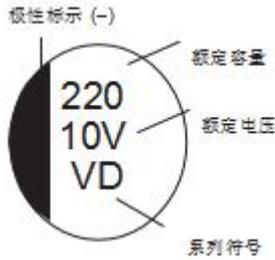
- 高温无铅回流焊产品
- 低阻抗、长寿命
- 工作温度范围宽
- 适用于高密度表面组装
- 符合 RoHS 标准

项目 Items	特性 Characteristics									
工作温度范围 Operating Temperature Range	-55℃ ~ +105℃									
额定电压范围 Rated Voltage Range	6.3V ~ 100V									
标称电容量范围 Nominal Capacitance Range	1 ~ 8200 μF									
标称电容量允许偏差 Nominal Capacitance Tolerance	±20% (20℃, 120Hz)									
漏电流 Leakage Current	$I \leq 0.01C_R U_R$ or $3(\mu A)$, 取较大者 (2分钟) C_R : 标称电容量 (μF) U_R : 额定电压 (V) $I \leq 0.01C_R U_R$ or $3(\mu A)$ whichever is greater (at 20℃, after 2 minutes) C_R : Nominal Capacitance (μF) U_R : Rated voltages (V)									
损耗角正切 (tg δ) Dissipation Factor (Max) 20℃, 120Hz	U_R (V)	6.3	10	16	25	35	50	63	80	100
	tg δ	0.26	0.20	0.16	0.14	0.12	0.10	0.10	0.08	0.07
	量大于 1000uF 者, 每增加 1000uF, 其损耗角正切值增加 0.02 When nominal capacitance exceeds 1000uF, add 0.02 to the value above for each 1000uF increase									
耐久性 Load Life	+105℃施加额定电压条件, 电容器应满足以下要求: ΦD=4, 5 和 6.3 为 2000 小时; ΦD=8, 10 和 12.5 为 5000 小时; ΦD=16 和 18 为 8000 小时 ΦD=4, 5 and 6.3:2000H; ΦD=8, 10 and 12.5:5000H; ΦD=16 and 18:8000H; application of rated voltage at 105℃, the capacitor shall meet the following requirement:									
	电容量变化率 Capacitance Change	±30%初始值以内 Within ±30% of the initial value								
	损耗角正切 Dissipation Factor	≤ 300%初始规定值 Not more than 300% of the initial specified value								
	漏电流 Leakage Current	≤ 初始规定值 Not more than the initial specified value								
高温贮存 Shelf Life	+105℃贮存 1000 小时后, 电容器应满足以上耐久性要求 After storage for 1000 hours at +105℃, the capacitors shall meet the requirement of load life above									
低温特性 Low Temperature Stability 阻抗比 Impedance Ratio (120Hz)	U_R (V)	6.3	10	16	25	35	50	63	80	100
	$Z(-25^\circ C)/Z(+20^\circ C)$	3	2	2	2	2	2	2	2	2
	$Z(-55^\circ C)/Z(+20^\circ C)$	5	4	4	3	3	3	3	3	3
耐焊接热 Resistance to Soldering Heat	在 250℃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℃ for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the following requirement.									
	电容量变化率 Capacitance Change	±10%初始值以内 Within ±10% of the initial value								
	损耗角正切 (tg δ) Dissipation Factor	≤ 初始规定值 Not more than the initial specified value								
	漏电流 Leakage Current	≤ 初始规定值 Not more than the initial specified value								
AEC-Q200	符合 AEC-Q200									

标示

外观尺寸

例：10V.DC 220uF VD系列



φD	L	A, B	H.	I	W	P	K
4	5.4±0.3	4.3	5.5	1.8	0.5~0.8	1.0	0.35 + 0.15/ - 0.20
5	5.4±0.3	5.3	6.5	2.1	0.5~0.8	1.3	
6.3	5.4±0.3	6.6	7.8	2.4	0.5~0.8	2.2	
6.3	7.7±0.3	6.6	7.8	2.4	0.5~0.8	2.2	0.70±0.20
8	6.2±0.5	8.3	10	3.4	0.5~0.8	2.2	
8	10.5±0.5	8.3	10	3.4	0.8~1.1	3.1	0.70±0.20
8	12.5±0.5	8.3	10	3.4	0.8~1.1	3.1	0.70±0.20
10	10.5±0.5	10.3	12	3.5	0.8~1.1	4.5	0.70±0.20
10	12.5±0.5	10.3	12	3.5	0.8~1.1	4.5	0.70±0.20
12.5	13.5±0.5	13.5	15	4.7	1.1~1.4	4.4	0.70±0.20
12.5	16.5±0.5	13.5	15	4.7	1.1~1.4	4.4	0.70±0.20
16	16.5±0.5	17	19	5.5	1.1~1.4	6.4	0.70±0.20
16	21.5±0.5	17	19	5.5	1.1~1.4	6.4	0.70±0.20
18	16.5±0.5	19	21	6.7	1.1~1.4	6.4	0.70±0.20
18	21.5±0.5	19	21	6.7	1.1~1.4	6.4	0.70±0.20

特性一览表 1

额定电压 (V. DC)	静电容量 (±20%) (uF)	产品尺寸(mm)		电气特性			料号	最小包装 数量 (PCS)
		φD	L	额定纹波电流 (100KHZ) (+105℃)	tan δ (120HZ) (+20℃)	Impedance (100Khz) (+20℃)		
6.3	27	4	5.4	80	0.26	1.80	VDOJ270MB054000LP0	2000
	33	5	5.4	150	0.26	0.76	VDOJ330MC054000LP0	1000
	47	5	5.4	150	0.26	0.76	VDOJ470MC054000LP0	1000
	56	5	5.4	150	0.26	0.76	VDOJ560MC054000LP0	1000
	68	6.3	5.4	230	0.26	0.44	VDOJ680MF054000LP0	1000
	100	6.3	5.4	230	0.26	0.44	VDOJ101MF054000LP0	1000
	150	6.3	5.4	230	0.26	0.44	VDOJ151MF054000LP0	1000
	220	6.3	5.4	230	0.26	0.44	VDOJ221MF054000LP0	1000
	330	6.3	7.7	280	0.26	0.34	VDOJ331ME077000LP0	1000
	330	8	6.2	280	0.26	0.36	VDOJ331MF065000LP0	1000
	470	8	10.5	450	0.26	0.17	VDOJ471MF105000LP0	500
	680	8	10.5	450	0.26	0.17	VDOJ681MF105000LP0	500
	1000	8	10.5	450	0.26	0.17	VDOJ102MF105000LP0	500
	1500	10	10.5	670	0.26	0.09	VDOJ152MG105000LP0	500
	2200	12.5	13.5	820	0.28	0.07	VDOJ222MI135000LP0	200
3300	12.5	16.5	950	0.30	0.06	VDOJ332MI165000LP0	200	

特性一览表 2

额定电压 (V. DC)	静电容量 (±20%) (uF)	产品尺寸(mm)		电气特性			料号	最小包装 数量 (PCS)
		φ D	L	额定纹波电流 (100KHZ) (+105℃)	tan δ (120HZ) (+20℃)	Impedance (100KHZ) (+20℃)		
6.3	4700	16	16.5	1260	0.32	0.054	VD0J472MJ165000LP0	125
	6800	18	16.5	1500	0.36	0.048	VD0J682MK165000LP0	125
	8200	18	21.5	1750	0.40	0.038	VD0J822MK215000LP0	125
10	22	4	5.4	80	0.20	1.80	VD1A220MB054000LP0	2000
	27	5	5.4	150	0.20	0.76	VD1A270MB054000LP0	1000
	33	5	5.4	150	0.20	0.76	VD1A330MB054000LP0	1000
	47	6.3	5.4	230	0.20	0.44	VD1A470ME054000LP0	1000
	56	6.3	5.4	230	0.20	0.44	VD1A560ME054000LP0	1000
	68	6.3	5.4	230	0.20	0.44	VD1A680ME054000LP0	1000
	100	6.3	5.4	230	0.20	0.44	VD1A101ME054000LP0	1000
	150	6.3	5.4	230	0.20	0.44	VD1A151ME054000LP0	1000
	220	6.3	7.7	280	0.20	0.34	VD1A221ME077000LP0	1000
	220	8	6.2	280	0.20	0.34	VD1A221MF065000LP0	1000
	330	8	10.5	450	0.20	0.17	VD1A331MF105000LP0	500
	470	8	10.5	450	0.20	0.17	VD1A471MF105000LP0	500
	680	10	10.5	670	0.20	0.09	VD1A681MG105000LP0	500
	1000	10	10.5	670	0.20	0.09	VD1A102MG105000LP0	500
	1500	12.5	13.5	820	0.20	0.07	VD1A152MI135000LP0	200
	2200	12.5	16.5	950	0.22	0.06	VD1A222MI165000LP0	200
	3300	16	16.5	1260	0.24	0.054	VD1A332MJ165000LP0	125
4700	16	16.5	1260	0.26	0.054	VD1A472MJ165000LP0	125	
6800	18	16.5	1500	0.30	0.048	VD1A682MK165000LP0	125	
8200	18	21.5	1750	0.34	0.038	VD1A822MK215000LP0	125	
16	15	4	5.4	80	0.16	1.80	VD1C150MB054000LP0	2000
	22	5	5.4	80	0.16	0.76	VD1C220MC054000LP0	1000
	27	5	5.4	150	0.16	0.76	VD1C270MC054000LP0	1000
	33	6.3	5.4	230	0.16	0.44	VD1C330ME054000LP0	1000
	47	6.3	5.4	230	0.16	0.44	VD1C470ME054000LP0	1000
	56	6.3	5.4	230	0.16	0.44	VD1C560ME054000LP0	1000
	68	6.3	5.4	230	0.16	0.44	VD1C680ME054000LP0	1000
	100	6.3	5.4	230	0.16	0.44	VD1C101ME054000LP0	1000
	150	8	6.2	280	0.16	0.36	VD1C151MF065000LP0	1000
	150	8	10.5	280	0.16	0.34	VD1C151MF105000LP0	500
	220	6.3	7.7	280	0.16	0.34	VD1C221ME077000LP0	1000
	330	8	10.5	450	0.16	0.17	VD1C331MF105000LP0	500
	470	8	10.5	450	0.16	0.17	VD1C471MF105000LP0	500
	680	10	10.5	670	0.16	0.09	VD1C681MG105000LP0	500
	1000	10	10.5	670	0.16	0.09	VD1C102MG105000LP0	500
	1500	12.5	13.5	820	0.16	0.07	VD1C152MI135000LP0	200
	2200	12.5	16.5	1260	0.18	0.06	VD1C222MI165000LP0	200
3300	16	16.5	1260	0.20	0.054	VD1C332MJ165000LP0	125	
4700	18	16.5	1260	0.22	0.048	VD1C472MK165000LP0	125	

特性一览表 3

额定电压 (V. DC)	静电容量 (±20%) (uF)	产品尺寸(mm)		电气特性			料号	最小包装 数量(PCS)
		φ D	L	额定纹波电 流 (100KHZ)	tan δ (120HZ) (+20℃)	Impedance (100KHZ) (+20℃)		
25	10	4	5.4	80	0.14	1.80	VD1E100MB054000LP0	2000
	15	5	5.4	150	0.14	0.76	VD1E150MC054000LP0	1000
	22	5	5.4	80	0.14	0.76	VD1E220MC054000LP0	1000
	27	6.3	5.4	230	0.14	0.44	VD1E270ME054000LP0	1000
	33	6.3	5.4	230	0.14	0.44	VD1E330ME054000LP0	1000
	47	6.3	5.4	230	0.14	0.44	VD1E470ME054000LP0	1000
	56	6.3	5.4	230	0.14	0.44	VD1E560ME054000LP0	1000
	68	6.3	5.4	230	0.14	0.44	VD1E680ME054000LP0	1000
	100	6.3	7.7	280	0.14	0.34	VD1E101ME077000LP0	1000
	100	8	6.2	280	0.14	0.36	VD1E101MF065000LP0	1000
	150	6.3	7.7	450	0.14	0.17	VD1E151MF077000LP0	1000
	220	8	10.5	450	0.14	0.17	VD1E221MF105000LP0	500
	330	8	10.5	450	0.14	0.17	VD1E331MF105000LP0	500
	470	10	10.5	670	0.14	0.09	VD1E471MG105000LP0	500
	680	10	10.5	670	0.14	0.09	VD1E681MG105000LP0	500
	1000	12.5	13.5	820	0.14	0.07	VD1E102MG135000LP0	200
	1500	12.5	16.5	950	0.14	0.06	VD1E152MG165000LP0	200
	2200	16	16.5	1260	0.16	0.054	VD1E222MJ165000LP0	125
3300	18	21.5	1260	0.18	0.038	VD1E332MK215000LP0	125	
35	4.7	4	5.4	80	0.12	1.80	VD1V4R7MB054000LP0	2000
	10	5	5.4	150	0.12	0.76	VD1V100MC054000LP0	1000
	15	5	5.4	150	0.12	0.76	VD1V150MC054000LP0	1000
	22	5	5.4	80	0.12	0.76	VD1V220MC054000LP0	1000
	27	6.3	5.4	230	0.12	0.44	VD1V270ME054000LP0	1000
	33	6.3	5.4	230	0.12	0.44	VD1V330ME054000LP0	1000
	47	6.3	5.4	230	0.12	0.44	VD1V470ME054000LP0	1000
	56	6.3	7.7	280	0.12	0.34	VD1V560ME077000LP0	1000
	68	6.3	7.7	280	0.12	0.34	VD1V680ME077000LP0	1000
	68	8	6.2	280	0.12	0.36	VD1V680MF065000LP0	1000
	100	8	10.5	300	0.12	0.17	VD1V101MF105000LP0	500
	150	8	10.5	300	0.12	0.17	VD1V151MF105000LP0	500
	220	8	10.5	450	0.12	0.17	VD1V221MF105000LP0	500
	330	10	10.5	670	0.12	0.09	VD1V331MG105000LP0	500
	470	10	10.5	670	0.12	0.09	VD1V471MG105000LP0	500
	680	12.5	13.5	820	0.12	0.07	VD1V681MI135000LP0	200
	1000	16	16.5	1260	0.12	0.054	VD1V102MJ165000LP0	125
	1500	18	16.5	1500	0.12	0.048	VD1V152MK165000LP0	125
2200	18	21.5	1750	0.14	0.038	VD1V222MK215000LP0	125	
50	1	4	5.4	30	0.10	5.0	VD1H1R0MB054000LP0	2000
	2.2	4	5.4	30	0.10	5.0	VD1H2R2MB054000LP0	2000
	3.3	4	5.4	30	0.10	5.0	VD1H3R3MB054000LP0	2000
	4.7	5	5.4	85	0.10	1.52	VD1H4R7MC054000LP0	1000
	10	6.3	5.4	165	0.10	0.88	VD1H100ME054000LP0	1000
	15	6.3	5.4	165	0.10	0.88	VD1H150ME054000LP0	1000
	22	6.3	5.4	165	0.10	0.88	VD1H220ME054000LP0	1000

特性一览表 4

额定电压 (V. DC)	静电容量 (±20%) (uF)	产品尺寸(mm)		电气特性			料号	最小包装 数量 (PCS)
		φD	L	额定纹波电流 (100KHZ) (+105℃)	tan δ (120HZ) (+20℃)	Impedance (100KHZ) (+20℃)		
50	27	6.3	7.7	185	0.10	0.68	VD1H270ME077000LP0	1000
	33	6.3	7.7	185	0.10	0.68	VD1H330ME077000LP0	1000
	47	6.3	7.7	185	0.10	0.68	VD1H470ME077000LP0	1000
	47	8	6.2	185	0.10	0.68	VD1H470MF065000LP0	1000
	56	8	10.5	300	0.10	0.34	VD1H560MF105000LP0	500
	68	8	10.5	300	0.10	0.34	VD1H680MF105000LP0	500
	100	8	10.5	300	0.10	0.34	VD1H101MF105000LP0	500
	150	10	10.5	550	0.10	0.18	VD1H105MG105000LP0	500
	220	10	10.5	550	0.10	0.18	VD1H221MG105000LP0	500
	330	10	12.5	550	0.10	0.18	VD1H331MG125000LP0	500
	470	12.	13.5	650	0.10	0.12	VD1H471MI135000LP0	200
	680	16	16.5	1000	0.10	0.073	VD1H681MJ165000LP0	125
	1000	18	16.5	1500	0.10	0.066	VD1H102MK165000LP0	125
1500	18	21.5	1620	0.10	0.05	VD1H152MK215000LP0	125	
63	4.7	5	5.4	70	0.10	1.9	VD1J4R7MC054000LP0	1000
	10	6.3	5.4	130	0.10	1.2	VD1J100ME054000LP0	1000
	22	6.3	7.7	150	0.10	0.9	VD1J220ME077000LP0	1000
	33	8	10.5	280	0.10	0.5	VD1J330MF105000LP0	500
	47	8	10.5	280	0.10	0.5	VD1J470MF105000LP0	500
	100	10	10.5	450	0.10	0.25	VD1J101MG105000LP0	500
	150	12.5	13.5	700	0.10	0.15	VD1J151MI135000LP0	200
	220	12.5	13.5	700	0.10	0.15	VD1J221MI135000LP0	200
	330	16	16.5	900	0.10	0.082	VD1J331MJ165000LP0	125
	470	16	16.5	900	0.10	0.082	VD1J471MJ165000LP0	125
	680	16	21.5	1150	0.10	0.080	VD1J681MJ215000LP0	125
	680	18	16.5	1150	0.10	0.080	VD1J681MK165000LP0	125
1000	18	21.5	1250	0.10	0.06	VD1J102MK215000LP0	125	
80	22	8	10.5	130	0.08	1.3	VD1K220MF105000LP0	500
	33	8	10.5	130	0.08	1.3	VD1K330MF105000LP0	500
	47	10	10.5	200	0.08	0.7	VD1K470MG105000LP0	500
	100	10	10.5	200	0.08	0.7	VD1K101MG105000LP0	500
	150	12.5	13.5	450	0.08	0.32	VD1K151MI135000LP0	200
	220	12.5	16.5	550	0.08	0.26	VD1K221MI165000LP0	200
	330	16	16.5	650	0.08	0.17	VD1K331MJ165000LP0	125
	470	16	21.5	900	0.08	0.15	VD1K471MJ215000LP0	125
	680	18	21.5	950	0.08	0.15	VD1K681MK215000LP0	125

■ Frequency coefficient of ripple current

Frequency	50, 60Hz	120Hz	300HZ	1KHz	10K~100KHz
Coefficient	0.35	0.50	0.64	0.83	1.00