

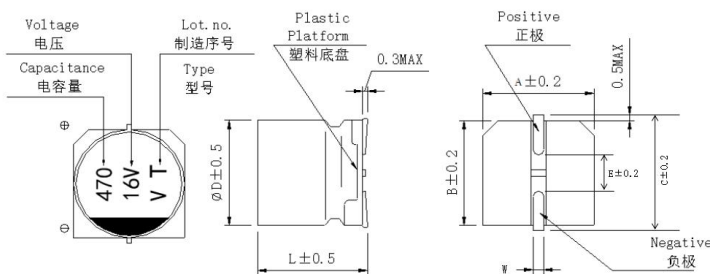
VT

- Suitable for Reflow Soldering
- Endurance 2000 hours at 105°C
- Comply with the RoHS

SPECIFICATIONS

Category Temperature Range	-55+105°C						-40+105°C																																																					
Voltage Range	6.3-100VDC						160-450VDC																																																					
Capacitance Tolerance	±20%(120Hz,20°C)																																																											
Leakage Current	6.3-100VDC						160-450VDC																																																					
	≤0.01CV(μA) or 3μA whichever is greater (2 minutes)						≤0.04CV+100 (μA)(2 minutes)																																																					
Dissipation Factor (120Hz, 20°C)	<table border="1"> <tr> <td>WV</td> <td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>80</td><td>100</td><td>160-250</td><td>400-450</td> </tr> <tr> <td>Φ4-Φ10</td> <td>0.30</td><td>0.24</td><td>0.20</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.12</td><td>0.12</td><td>0.12</td><td>0.15</td><td>0.20</td> </tr> <tr> <td>Φ12.5-Φ16</td> <td>0.40</td><td>0.30</td><td>0.26</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.12</td><td>0.12</td><td>0.12</td><td>0.15</td><td>0.20</td> </tr> </table>												WV	6.3	10	16	25	35	50	63	80	100	160-250	400-450	Φ4-Φ10	0.30	0.24	0.20	0.16	0.14	0.12	0.12	0.12	0.12	0.15	0.20	Φ12.5-Φ16	0.40	0.30	0.26	0.16	0.14	0.12	0.12	0.12	0.12	0.15	0.20												
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For capacities greater than 1000 μF, for every increase of 1000 μF, the dissipation factor increases by 0.02.																																																												
Equivalent Series Resistance (100KHz, 20°C)	<table border="1"> <tr> <td>WV</td> <td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>80</td><td>100</td><td>160-250</td><td>400-450</td> </tr> <tr> <td>Z_{.25°C}/Z_{+20°C}</td> <td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>6</td><td>6</td> </tr> <tr> <td>Z_{.40°C}/Z_{+20°C}</td> <td>6</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td><td>10</td><td>18</td> </tr> <tr> <td>Z_{-.55°C}/Z_{+20°C}</td> <td>8</td><td>6</td><td>4</td><td>4</td><td>4</td><td>4</td><td>4</td><td>4</td><td>4</td><td>-</td><td>-</td> </tr> </table>												WV	6.3	10	16	25	35	50	63	80	100	160-250	400-450	Z _{.25°C} /Z _{+20°C}	4	3	2	2	2	2	2	2	2	6	6	Z _{.40°C} /Z _{+20°C}	6	4	3	3	3	3	3	3	3	10	18	Z _{-.55°C} /Z _{+20°C}	8	6	4	4	4	4	4	4	4	-	-
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	Z _{.25°C} /Z _{+20°C}	4	3	2	2	2	2	2	2	2	6	6																																																
Z _{.40°C} /Z _{+20°C}	6	4	3	3	3	3	3	3	3	10	18																																																	
Z _{-.55°C} /Z _{+20°C}	8	6	4	4	4	4	4	4	4	-	-																																																	
Endurance	In an environment of +105°C, apply the operating voltage with ripple current for 2000 hours, and after 16 hours of recovery, the product performance meets the following requirements:																																																											
	Diameter		φD≤6.3				φD≥8																																																					
	Capacitance Change		Within ±25% of initial measured				Within ±20% of initial measured																																																					
	Dissipation Factor		≤ 200% of initial specified value				≤ 200% of initial specified value																																																					
	Leakage Current		≤ initial specified value				≤ initial specified value																																																					
Shelf Life	In an environment of +105°C, placed for 1000 hours, and after 16 hours of recovery, the product performance meets the following requirements:																																																											
	Capacitance Change		Within ±20% of initial measured value																																																									
	Dissipation Factor		≤ 200% of initial specified value																																																									
	Leakage Current		≤ 200% of initial specified value																																																									
Welding	In an environment of +250°C, remains on the hot plate for 30 seconds, and after 16 hours of recovery, the product performance meets the following requirements:																																																											
	Capacitance Change		Within ±10% of initial measured value																																																									
	Dissipation Factor		≤ initial specified value																																																									
	Leakage Current		≤ initial specified value																																																									

DRAWING & DIMENSIONS (Unit: mm)



D	L	A	B	C	E	W
φ4	5.4	4.3	4.3	5.1	1.0	0.5-0.9
φ5	5.4	5.3	5.3	6.1	1.3	0.5-0.9
φ6.3	5.4	6.6	6.6	7.4	2.2	0.5-0.9
φ6.3	7.7	6.6	6.6	7.4	2.2	0.5-0.9
φ8	10.5	8.4	8.4	9.2	3.1	0.9-1.1
φ10	7.7	10.4	10.4	11.2	4.5	0.9-1.1
φ10	10.5	10.4	10.4	11.2	4.5	0.9-1.1
φ12.5	13.5	13.0	13.0	14.9	4.4	0.8-1.2
φ12.5	16	13.0	13.0	14.9	4.4	0.8-1.2
φ16	16.5	17.0	17.0	18.8	6.4	0.8-1.2

FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

Capacitance (μF)	Frequency(Hz)			
	50Hz	120Hz	1KHz	≥10KHz
Capacitance ≤1000	0.80	1.00	1.25	1.40
1000 < Capacitance ≤4700	0.85	1.00	1.15	1.25

VT

NOMINAL CAPACITANCE, RATED VOLTAGE & DIMENSIONS

Rated Voltage (V)	Nominal Capacitance (uF)	Dimensions (mm)	Ripple Current (mA)	Part Number
6.3V (0J)	22	4X5.4	22	VT0J220M045NAZH00000
	33	5X5.4	34	VT0J330M055NBZH00000
	47	5X5.4	38	VT0J470M055NBZH00000
	100	6.3X5.4	69	VT0J101M6L5NCZH00000
	220	6.3X4.7	120	VT0J221M6L4PCZH00000
	330	8X10.5	290	VT0J331M081ADZH00000
	470	8X10.5	320	VT0J471M081ADZH00000
	1000	10X10.5	410	VT0J102M101AEZH00000
	2200	12.5X13.5	680	VT0J222M1C1DEZH00000
	3300	12.5X16	850	VT0J332M1C16EZH00000
4700	16X16.5	1000	VT0J472M161GFZH00000	
10V	22	4X5.4	22	VT1A220M045NAZH00000
	33	5X5.4	34	VT1A330M055NBZH00000
	47	5X5.4	38	VT1A470M055NBZH00000
	100	6.3X5.4	69	VT1A101M6L5NCZH00000
	220	6.3X7.7	120	VT1A221M6L7PCZH00000
	330	8X10.5	290	VT1A331M081ADZH00000
	470	8X10.5	320	VT1A471M081ADZH00000
		10X7.7	320	VT1A471M107PEZH00000
	1000	10X10.5	410	VT1A102M101AEZH00000
	2200	12.5X13.5	680	VT1A222M1C1DEZH00000
	3300	16X16.5	950	VT1A332M161GFZH00000
	4700	16X16.5	1000	VT1A472M161GFZH00000
16V (1C)	10	4X5.4	20	VT1C100M045NAZH00000
	22	5X5.4	30	VT1C220M055NBZH00000
	33	5X5.4	34	VT1C330M055NBZH00000
	47	6.3X5.4	48	VT1C470M6L5NCZH00000
	100	6.3X5.4	69	VT1C101M6L5NCZH00000
	220	6.3X7.7	120	VT1C221M6L7PCZH00000
	330	8X10.5	290	VT1C331M081ADZH00000
		10X7.7	290	VT1C331M107PEZH00000
	470	10X10.5	380	VT1C471M101AEZH00000
	1000	12.5X13.5	550	VT1C102M1C1DEZH00000
	2200	16X16.5	900	VT1C222M161GFZH00000
	3300	16X16.5	950	VT1C332M161GFZH00000
25V (1E)	4.7	4X5.4	17	VT1E4R7M045NAZH00000
	10	4X5.4	20	VT1E100M045NAZH00000
	22	5X5.4	30	VT1E220M055NBZH00000
	33	6.3X5.4	46	VT1E330M6L5NCZH00000
	47	6.3X5.4	48	VT1E470M6L5NCZH00000
	100	6.3X7.7	100	VT1E101M6L7PCZH00000
	220	8X10.5	270	VT1E221M081ADZH00000
		10X7.7	270	VT1E221M107PEZH00000
	330	8X10.5	290	VT1E331M081ADZH00000
	470	10X10.5	380	VT1E471M101AEZH00000
	1000	12.5X16	550	VT1E102M1C16EZH00000
	2200	16X16.5	900	VT1E222M161GFZH00000

Rated ripple current: (105°C, 120Hz)

VT

NOMINAL CAPACITANCE, RATED VOLTAGE & DIMENSIONS

Rated Voltage (V)	Nominal Capacitance (uF)	Dimensions (mm)	Ripple Current (mA)	Part Number
35V (1V)	4.7	4X5.4	17	VT1V4R7M045NAZH00000
	10	5X5.4	27	VT1V100M055NBZH00000
	22	6.3X5.4	44	VT1V220M6L5NCZH00000
	33	6.3X5.4	46	VT1V330M6L5NCZH00000
	47	6.3X7.7	80	VT1V470M6L7PCZH00000
	100	8X10.5	240	VT1V101M081ADZH00000
	220	8X10.5	270	VT1V221M081ADZH00000
	330	10X10.5	370	VT1V331M101AEZH00000
	470	12.5X13.5	520	VT1V471M1C1DEZH00000
50 (1H)	1000	16X16.5	800	VT1V102M161GFZH00000
	0.22	4X5.4	3	VT1HR22M045NAZH00000
	0.33	4X5.4	4	VT1HR33M045NAZH00000
	0.47	4X5.4	5	VT1HR47M045NAZH00000
	1.0	4X5.4	8	VT1H1R0M045NAZH00000
	2.2	4X5.4	12	VT1H2R2M045NAZH00000
	3.3	4X5.4	14	VT1H3R3M045NAZH00000
	4.7	5X5.4	20	VT1H4R7M055NBZH00000
	10	6.3X5.4	32	VT1H100M6L5NCZH00000
	22	6.3X5.4	38	VT1H220M6L5NCZH00000
	33	6.3X7.7	65	VT1H330M6L7PCZH00000
	47	6.3X7.7	70	VT1H470M6L7PCZH00000
	100	8X10.5	210	VT1H101M081ADZH00000
	220	10X10.5	330	VT1H221M101AEZH00000
330	12.5X13.5	490	VT1H331M1C1DEZH00000	
470	12.5X16	550	VT1H471M1C16EZHZ00000	
63V (1J)	0.47	4X5.4	5	VT1JR47M045NAZH00000
	1.0	4X5.4	8	VT1J1R0M045NAZH00000
	2.2	4X5.4	12	VT1J2R2M045NAZH00000
	3.3	5X5.4	17	VT1J3R3M055NBZH00000
	4.7	6.3X5.4	22	VT1J4R7M6L5NCZH00000
	10	6.3X5.4	32	VT1J100M6L5NCZH00000
	22	6.3X7.7	58	VT1J220M6L7PCZH00000
	33	8X10.5	140	VT1J330M081ADZH00000
	47	8X10.5	170	VT1J470M081ADZH00000
	100	10X10.5	310	VT1J101M101AEZH00000
	220	12.5X13.5	470	VT1J221M1C1DEZH00000
	330	16X16.5	650	VT1J331M161GFZH00000
470	16X16.5	700	VT1J471M161GFZH00000	
80 (1K)	10	6.3X7.7	70	VT1K100M6L7PCZH00000
	22	8X10.5	187	VT1K220M081ADZH00000
	33	8X10.5	225	VT1K330M081ADZH00000
	47	10X10.5	287	VT1K470M101AEZH00000
	100	12.5X13.5	300	VT1K101M1C1DEZH00000
	150	12.5X13.5	400	VT1K151M1C1DEZH00000
	220	12.5X16	480	VT1K221M1C16EZHZ00000

Rated ripple current: (105°C, 120Hz)

VT

NOMINAL CAPACITANCE, RATED VOLTAGE & DIMENSIONS

Rated Voltage (V)	Nominal Capacitance (uF)	Dimensions (mm)	Ripple Current (mA)	Part Number
100V (2A)	22	8X10.5	100	VT2A220M081ADZH00000
	33	10X10.5	150	VT2A330M101AEZH00000
	47	12.5X13.5	250	VT2A470M1C1DEZH00000
	100	12.5X13.5	380	VT2A101M1C1DEZH00000
	220	16X16.5	450	VT2A221M161GFZH00000
160 (2C)	33	12.5X13.5	95	VT2C330M1C1DEZH00000
	47	16X16.5	240	VT2C470M161GFZH00000
	100	16X16.5	250	VT2C101M161GFZH00000
200V (2D)	10	12.5X13.5	80	VT2D100M1C1DEZH00000
	22	12.5X16	110	VT2D220M1C16EZH00000
	33	12.5X16	120	VT2D330M1C16EZH00000
	47	16X16.5	220	VT2D470M161GFZH00000
250V (2E)	3.3	12.5X13.5	60	VT2E3R3M1C1DEZH00000
	4.7	12.5X13.5	65	VT2E4R7M1C1DEZH00000
	10	12.5X13.5	70	VT2E100M1C1DEZH00000
	22	12.5X13.5	105	VT2E220M1C1DEZH00000
	33	16X16.5	180	VT2E330M161GFZH00000
	47	16X16.5	220	VT2E470M161GFZH00000
400 (2G)	4.7	12.5X13.5	45	VT2G4R7M1C1DEZH00000
	10	12.5X13.5	50	VT2G100M1C1DEZH00000
	22	16X16.5	85	VT2G220M161GFZH00000
450V (2W)	3.3	12.5X13.5	40	VT2W3R3M1C1DEZH00000
	4.7	12.5X13.5	45	VT2W4R7M1C1DEZH00000
	10	12.5X16	75	VT2W100M1C16EZH00000
	22	16X16.5	85	VT2W220M161GFZH00000

Rated ripple current: (105°C,120Hz)