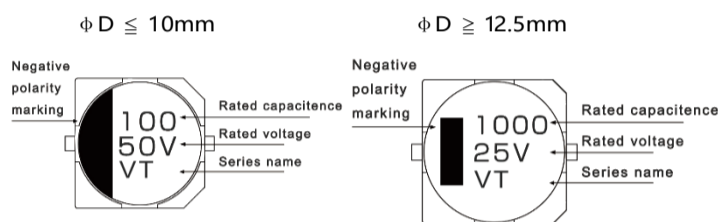


- Endurance : 105°C 2000H
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- RoHS 2.0 compliant
- 219 SVHC & REACH compliant

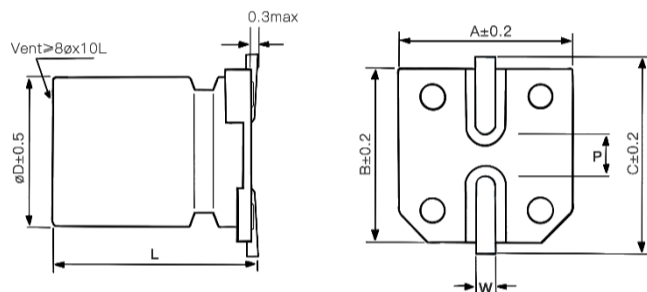


Marking color : Black

Specifications										
Category temp. range	-55°C to +105°C									
Capacitance tolerance	±20% (120 Hz / +20 °C)									
Leakage current	I ≤ 0.01 CV or 3 μA whichever is greater (after 2 minutes)									
Tan δ	Please see the attached characteristics list									
Characteristics at low temperature	Rated voltage ( V )	6.3	10	16	25	35	50	63	100	Impedance ratio at 120 Hz
	Z (-25 °C) / Z (+20 °C)	4	4	3	2	2	2	2	3	
	Z (-55 °C) / Z (+20 °C)	12	8	6	4	3	3	3	4	
Endurance	After applying rated working voltage for 2000 hours at +105 °C ± 2 °C, and then being stabilized at +20 °C, capacitors shall meet the following limits.									
	Capacitance change	φ D ≤ 6.3mm : Within ±25% of the initial value φ D ≥ 8mm : Within ±20% of the initial value								
	Dissipation factor (tan δ)	φ D ≤ 6.3mm : Less than 300% of the initial value φ D ≥ 8mm : Less than 200% of the initial value								
	Leakage current	Within the initial limit								
Shelf life	After storage for 1000 h at +105 °C ± 2 °C with no voltage applied and then being stabilized at +20 °C, capacitors shall meet the limits specified in endurance.									
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 °C, capacitors shall meet the following limits.									
	Capacitance change	Within ±10% of the initial value								
	Dissipation factor (tan δ)	Within the initial limit								
	Leakage current	Within the initial limit								
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	1kHz	10kHz≤					
	C ≤ 1000μF	0.7	1.0	1.2	1.3					
	C > 1000μF	0.8	1.0	1.1	1.2					

**Marking :**


Dimensions							Unit : mm
φ D	L	A	B	C	W	P±0.2	
4	5.7±0.3	4.3	4.3	5.1	0.5~0.8	1.0	
5	5.7±0.3	5.3	5.3	6.1	0.5~0.8	1.3	
6.3	5.7±0.3	6.6	6.6	7.3	0.5~0.8	2.2	
6.3	7.7±0.3	6.6	6.6	7.3	0.5~0.8	2.2	
8	6.5±0.5	8.3	8.3	9.2	0.7~1.2	3.1	
8	10.5±0.5	8.3	8.3	9.2	0.7~1.2	3.1	
10	7.7±0.3	10.3	10.3	11.2	0.7~1.2	4.4	
10	10.5±0.5	10.3	10.3	11.2	0.7~1.2	4.4	
10	13±0.5	10.3	10.3	11.2	0.7~1.2	4.4	
12.5	13.5±0.5	13.0	13.0	14.0	1.0~1.4	4.4	
12.5	16±0.5	13.0	13.0	14.0	1.0~1.4	4.4	

**Dimensions :**

**Part Number System :**

VT series      16V                  220μF                  ±20 %                  6.3 φ X7.7L  
**KVT**            **1C**                    **221**                    **M**                    **0607**  
 Series name | Rated voltage | Capacitance | Capacitance tolerance | Case Size

**Characteristics list**

Rated voltage ( V )	Capacitance ( ±20% ) ( μF )	Case size		Specification		Part Number③	Taping&Reel
		φD ( mm )	L ( mm )	Rated ripple current① ( mA rms )	tan δ②		MPQ ( pcs/reel )
6.3	22	4	5.7	22	0.35	KVT0J220M0406	2000
	33	5	5.7	34	0.35	KVT0J330M0506	1000
	47	5	5.7	38	0.35	KVT0J470M0506	1000
	100	5	5.7	45	0.35	KVT0J101M0506	1000
		6.3	5.7	69	0.35	KVT0J101M0606	1000
	220	6.3	5.7	95	0.35	KVT0J221M0606	1000
		6.3	7.7	120	0.35	KVT0J221M0607	1000
	330	6.3	7.7	105	0.35	KVT0J331M0607	1000
		8	6.5	120	0.35	KVT0J331M0806	1000
	470	8	10.5	230	0.35	KVT0J331M0810	500
6.3		7.7	120	0.35	KVT0J471M0607	1000	
10	22	4	5.7	23	0.24	KVT1A220M0406	2000
		4	5.7	25	0.24	KVT1A330M0406	2000
	33	5	5.7	35	0.24	KVT1A330M0506	1000
		5	5.7	38	0.24	KVT1A470M0506	1000
	47	5	5.7	45	0.24	KVT1A101M0506	1000
		6.3	5.7	69	0.24	KVT1A101M0606	1000
	150	6.3	5.7	80	0.24	KVT1A151M0606	1000
		6.3	5.7	80	0.24	KVT1A221M0606	1000
	220	6.3	7.7	120	0.24	KVT1A221M0607	1000
		8	6.5	120	0.24	KVT1A221M0806	1000
330	6.3	7.7	125	0.24	KVT1A331M0607	1000	
	8	10.5	290	0.24	KVT1A331M0810	500	
470	8	10.5	290	0.24	KVT1A471M0810	500	
	10	7.7	290	0.24	KVT1A471M1007	500	
1000	10	10.5	400	0.26	KVT1A102M1010	500	
2200	12.5	13.5	680	0.38	KVT1A222M1313	200	
16	10	4	5.7	20	0.20	KVT1C100M0406	2000
		4	5.7	22	0.20	KVT1C220M0406	2000
	22	5	5.7	30	0.20	KVT1C220M0506	1000
		5	5.7	35	0.20	KVT1C330M0506	1000
	33	6.3	5.7	45	0.20	KVT1C330M0606	1000
		5	5.7	39	0.20	KVT1C470M0506	1000
	47	6.3	5.7	55	0.20	KVT1C470M0606	1000
		6.3	5.7	70	0.20	KVT1C101M0606	1000
	100	8	6.5	120	0.20	KVT1C101M0806	1000
		6.3	7.7	120	0.20	KVT1C221M0607	1000
	220	8	6.5	120	0.20	KVT1C221M0806	1000
		8	10.5	220	0.20	KVT1C221M0810	500
	330	8	10.5	220	0.20	KVT1C331M0810	500
		10	7.7	200	0.20	KVT1C331M1007	500
	470	8	10.5	250	0.20	KVT1C471M0810	500
		10	10.5	340	0.20	KVT1C471M1010	500
	1000	10	10.5	340	0.22	KVT1C102M1010	500
		10	13	390	0.22	KVT1C102M1013	400
		12.5	13.5	500	0.32	KVT1C102M1313	200

① Rated ripple current (120Hz / +105°C)    ② tan δ (120Hz / +20°C)    ③ For plastic reel packaging, the Part Number is appended with "PR" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

**Characteristics list**

Rated voltage (V)	Capacitance (±20%) (µF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
25	4.7	4	5.7	17	0.18	KVT1E4R7M0406	2000
	10	4	5.7	20	0.18	KVT1E100M0406	2000
		5	5.7	27	0.18	KVT1E100M0506	1000
	22	5	5.7	30	0.18	KVT1E220M0506	1000
		6.3	5.7	44	0.18	KVT1E220M0606	1000
	33	5	5.7	35	0.18	KVT1E330M0506	1000
		6.3	5.7	46	0.18	KVT1E330M0606	1000
	47	6.3	5.7	48	0.18	KVT1E470M0606	1000
		8	6.5	79	0.18	KVT1E470M0806	1000
	100	6.3	7.7	100	0.18	KVT1E101M0607	1000
		8	6.5	100	0.18	KVT1E101M0806	1000
		8	10.5	150	0.18	KVT1E101M0810	500
	220	8	10.5	200	0.18	KVT1E221M0810	500
10		7.7	190	0.18	KVT1E221M1007	500	
330	8	10.5	220	0.18	KVT1E331M0810	500	
	10	10.5	240	0.18	KVT1E331M1010	500	
470	10	10.5	280	0.18	KVT1E471M1010	500	
1000	12.5	13.5	580	0.30	KVT1E102M1313	200	
35	4.7	4	5.7	17	0.16	KVT1V4R7M0406	2000
	10	4	5.7	17	0.16	KVT1V100M0406	2000
		5	5.7	25	0.16	KVT1V100M0506	1000
	22	5	5.7	30	0.16	KVT1V220M0506	1000
		6.3	5.7	44	0.16	KVT1V220M0606	1000
	33	6.3	5.7	46	0.16	KVT1V330M0606	1000
		8	6.5	76	0.16	KVT1V330M0806	1000
	47	6.3	5.7	50	0.16	KVT1V470M0606	1000
		6.3	7.7	80	0.16	KVT1V470M0607	1000
		8	6.5	80	0.16	KVT1V470M0806	1000
	100	6.3	7.7	85	0.16	KVT1V101M0607	1000
		8	10.5	150	0.16	KVT1V101M0810	500
		10	7.7	160	0.16	KVT1V101M1007	500
	150	8	10.5	185	0.16	KVT1V151M0810	500
	220	8	10.5	220	0.16	KVT1V221M0810	500
		10	10.5	250	0.16	KVT1V221M1010	500
330	10	10.5	300	0.16	KVT1V331M1010	500	
	10	13	330	0.16	KVT1V331M1013	400	
470	10	10.5	310	0.16	KVT1V471M1010	500	
	10	13	375	0.16	KVT1V471M1013	400	
	12.5	13.5	520	0.22	KVT1V471M1313	200	
50	1	4	5.7	8	0.14	KVT1H010M0406	2000
	2.2	4	5.7	12	0.14	KVT1H2R2M0406	2000
	3.3	4	5.7	14	0.14	KVT1H3R3M0406	2000
	4.7	4	5.7	14	0.14	KVT1H4R7M0406	2000
		5	5.7	20	0.14	KVT1H4R7M0506	1000
	10	5	5.7	20	0.14	KVT1H100M0506	1000
		6.3	5.7	32	0.14	KVT1H100M0606	1000
	22	6.3	5.7	38	0.14	KVT1H220M0606	1000
		6.3	7.7	50	0.14	KVT1H220M0607	1000
		8	6.5	70	0.14	KVT1H220M0806	1000
	33	6.3	7.7	60	0.14	KVT1H330M0607	1000
		8	6.5	70	0.14	KVT1H330M0806	1000
	47	6.3	7.7	63	0.14	KVT1H470M0607	1000
		8	6.5	85	0.14	KVT1H470M0806	1000
		8	10.5	100	0.14	KVT1H470M0810	500
	100	8	10.5	160	0.14	KVT1H101M0810	500
10		7.7	180	0.14	KVT1H101M1007	500	
10		10.5	160	0.14	KVT1H101M1010	500	
220	10	10.5	230	0.14	KVT1H221M1010	500	
	10	13	300	0.14	KVT1H221M1013	400	
330	12.5	13.5	420	0.18	KVT1H331M1313	200	
63	1	4	5.7	8	0.14	KVT1J010M0406	2000
	2.2	4	5.7	11	0.14	KVT1J2R2M0406	2000
	3.3	5	5.7	14	0.14	KVT1J3R3M0506	1000
		6.3	5.7	30	0.14	KVT1J3R3M0606	1000
	4.7	6.3	5.7	25	0.14	KVT1J4R7M0606	1000
	10	6.3	5.7	24	0.14	KVT1J100M0606	1000
		8	6.5	25	0.14	KVT1J100M0806	1000
	22	6.3	7.7	49	0.14	KVT1J220M0607	1000
		8	6.5	55	0.14	KVT1J220M0806	1000
		8	10.5	98	0.14	KVT1J220M0810	500
	33	8	10.5	112	0.14	KVT1J330M0810	500
	47	8	10.5	119	0.14	KVT1J470M0810	500
		10	10.5	160	0.14	KVT1J470M1010	500
	100	10	10.5	196	0.14	KVT1J101M1010	500
		10	13	210	0.14	KVT1J101M1013	400
		12.5	13.5	270	0.16	KVT1J101M1313	200
220	12.5	13.5	470	0.16	KVT1J221M1313	200	
100	4.7	5	5.7	15	0.14	KVT2A4R7M0506	1000
		6.3	5.7	21	0.14	KVT2A4R7M0606	1000
		6.3	7.7	35	0.14	KVT2A4R7M0607	1000
	10	6.3	7.7	35	0.14	KVT2A100M0607	1000
		8	10.5	80	0.14	KVT2A100M0810	500
	22	8	10.5	90	0.14	KVT2A220M0810	500
		10	10.5	130	0.14	KVT2A220M1010	500
	33	10	10.5	130	0.14	KVT2A330M1010	500
	47	10	10.5	140	0.14	KVT2A470M1010	500
		10	13	160	0.14	KVT2A470M1013	400
		12.5	13.5	250	0.16	KVT2A470M1313	200
100	12.5	13.5	380	0.16	KVT2A101M1313	200	

① Rated ripple current (120Hz / +105°C)    ② tan δ (120Hz / +20°C)    ③ For plastic reel packaging , the Part Number is appended with "PR" at the end.

※ Please refer to the page of reflow conditions for reflow profile.