

### FEATURES

- High Temperature Range up to +125°C
- For automobile modules and other high temperature applications
- RoHS Compliant



### SPECIFICATIONS

Items	Performance							
Operating Temperature Range	10 ~ 50V							
	40 °C ~ +125 °C							
Capacitance Tolerance	±20%							
Leakage Current (at 20 °C)	I = 0.03CV or 4 (μA) whichever is greater (after 1 minute) Where C = rated capacitance in μF. V = rated DC working voltage in V.							
Dissipation Factor (Tan δ at 120Hz, 20 °C)	Rated Voltage	10	16	25	35	50		
	Tan δ (max)	0.32	0.24	0.21	0.18	0.18		
Low Temperature Characteristics (at 120Hz)	Impedance ratio shall not exceed the values given in the table below.							
	Rated Voltage			10	16	25	35	50
	Impedance Ratio	Z (-40 °C)/Z(+20 °C)		5	4	3	3	3
Load Life Test	Test Time	1,000 Hrs						
	Capacitance Change	Within ±30% of initial value						
	Dissipation Factor	Less than 300% of specified value						
	Leakage Current	Within specified value						
	* The above specifications shall be satisfied when the capacitors are restored to 20 °C after the rated voltage applied for 1,000 hrs at 125 °C							
Shelf Life Test	Test Time: 1,000 hrs; other items are the same as those for the load life test.							
Other Standards	JIS C 5101-1, -18							

### DIMENSION & PERMISSIBLE RIPPLE CURRENT

Dimension: φD x L(mm)

Ripple Current mA/rms at 120KHz, 125°C

μF	VDC Contents	10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)	
		φD x L	mA	φD x L	mA	φD x L	mA	φD x L	mA	φD x L	mA
33	330									8 x 10	46
47	470							8 x 10	52	10 x 10	58
100	101			8 x 10	66	8 x 10	74	10 x 10	80	12.5 x 13.5	357
220	221	8.0 x 10	90	10 x 10	102	10 x 10	116	12.5 x 13.5	357	16 x 16.5	552
330	331	10.0 x 10	112	13 x 13.5	480	12.5 x 13.5	480	16 x 16.5	650	16 x 16.5	552
470	471	12.5 x 13.5	480	13 x 13.5	480	16 x 16.5	650	16 x 16.5	650		
680	681	12.5 x 16	585	16 x 16.5	650						
1,000	102	12.5 x 16	585								

### PAD SPACING AND DIAMETER

φD	L	A	B	C	W	P±0.2	Fig. No.
8	10.0 ± 0.5	8.4	8.4	3.0	0.7 to 1.1	3.1	1
10	10.0 ± 0.5	10.4	10.4	3.3	0.7 to 1.1	4.7	1
12.5	13.0 ± 0.5	12.8	12.8	4.9	1.1 to 1.4	4.2	2
12.5	16.0 ± 0.5	12.8	12.8	4.9	1.1 to 1.4	4.2	2
16	16.5 ± 0.5	16.3	16.3	5.8	1.1 to 1.4	6.0	2

Fig. 1

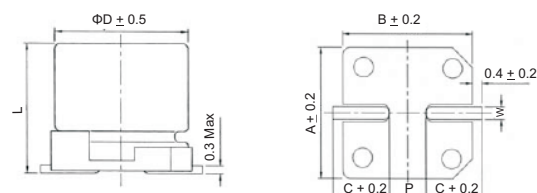
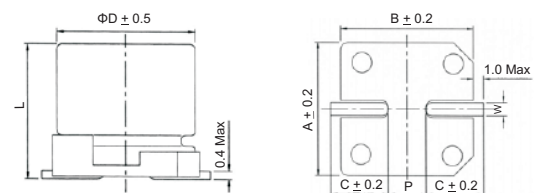


Fig. 2



### PART NUMBER EXAMPLE VUA 221 M 1A TR 080 100