

# MVK Series

● 105°C 1,000~ 2,000Hrs assured

- Vertical SMD type
- Wide Temperature range
- For CD/DVD-ROM, Navigation, LCD MT/TV
- Ecological capacitors are also available.

Solvent-proof



MV

MVK

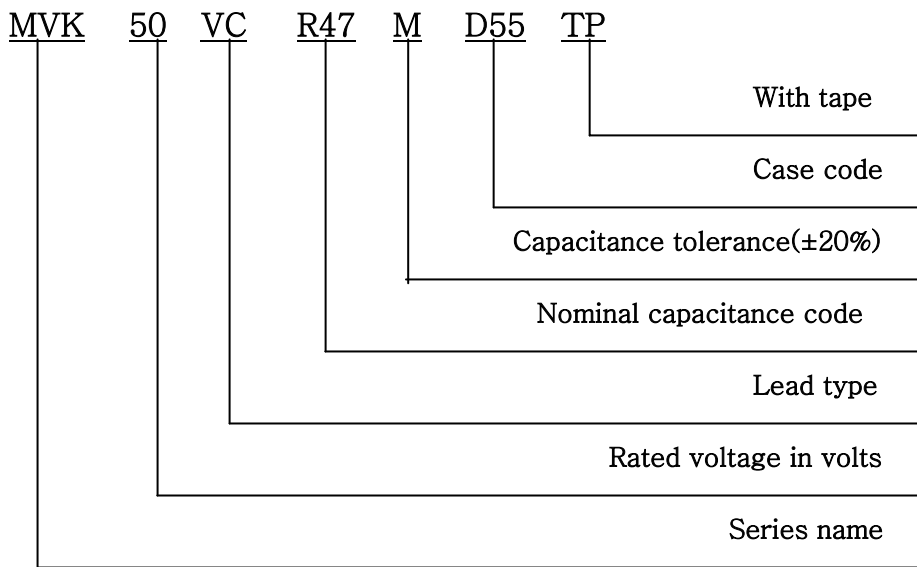
Wide Temp

## SPECIFICATIONS

Item	Characteristics									
Rated Voltage Range	6.3 ~ 450V <sub>DC</sub>									
Operating Temperature Range	-40 ~ +105°C									
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)									
Leakage Current	Rated Voltage(V <sub>DC</sub> )	6.3~100						160~450		
	Max. Leakage current(μA)	0.01CV (μA) or 3μA, whichever is greater. (at 20 °C, 2 minutes)						0.04CV + 100(μA) (at 20 °C, 1 minutes)		
	Where, C: Nominal capacitor(μF), V: Rated voltage (V <sub>DC</sub> )									
Dissipation Factor Tanδ (Max.)	Rated Voltage(V <sub>DC</sub> )	6.3	10	16	25	35	50~100	160~250	400~450	
	∅ 4~ ∅ 6.3	0.30	0.24	0.20	0.16	0.14	0.12	-	-	
	∅ 8~ ∅ 12.5	0.40	0.30	0.26	0.16	0.14	0.12	0.15	0.20	
(at 20°C, at 120Hz)										
Temperature Characteristics (Max. Impedance ratio)	Rated Voltage(V <sub>DC</sub> )	6.3	10	16	25	35	500~100	160~250	400~450	
	Z(-25°C)/Z(20°C)	4	3	2	2	2	3	3	6	
	Z(-40°C)/Z(20°C)	10	8	6	4	3	4	6	10	
(at 120Hz)										
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied with the following conditions. ∅ 4~ ∅ 6.3 : 105°C, 1,000hours. ∅ 8 & ∅ 12.5 : 105°C, 2,000hours Capacitance change ∅ 4~ ∅ 6.3 ≤± 30% of the initial value ∅ 8~ ∅ 12.5 ≤± 20% of the initial value Tanδ ∅ 4~ ∅ 6.3 ≤ 300% of the initial specified value ∅ 8~ ∅ 10 ≤ 200% of the initial specified value Leakage current ≤ The initial specified value									

Shelf Life	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for the specified time at 105°C without voltage applied..</p> <p>The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and Not more than 48 hours before the measurement.</p> <p>Ø 4~ Ø 6.3 : 105°C, 500 hours.    Ø 8 &amp; Ø 12.5 : 105°C, 1,000 hours</p> <p>Capacitance change</p> <p>Ø 4~ Ø 6.3 ≤ ± 25% of the initial value</p> <p>Ø 8~ Ø 12.5 ≤ ± 20% of the initial value</p> <p>Tanδ ≤ 200% of the initial specified value</p> <p>Leakage current ≤ The initial specified value</p>
Others	Satisfied characteristics W of KS C 6421

## PART NUMBERING SYSTEM

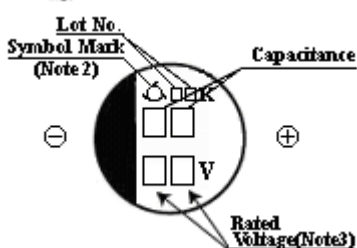


Capacitance	Code
0.1 μF	R1
0.47 μF	R47
1.0 μF	1
4.7 μF	4R7
10 μF	10
100 μF	100

## DIMENSIONS OF MKV Series (Type :VC)

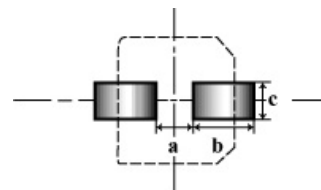
### DIMENSIONS

### Marking

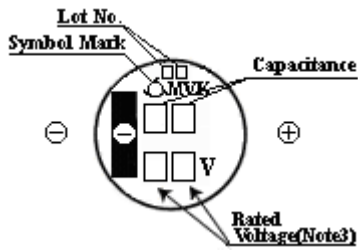


< B55 ~ J10 >

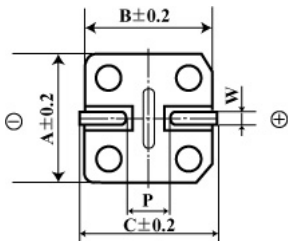
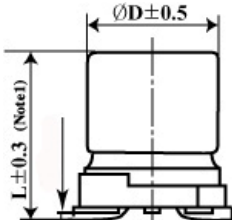
### Recommended solder land on PC board



**Sold land on PC board**



< K14 >



Note 1 : L + 0.5 for 8 x 6.3 (H63), 8 x 10 (H10), 10 x 10 (J10)

Note 2 : 4 x 5.2 (D55), 5 x 5.2 (E55) is excluded symbol mark

Note 3 : 6.3WV is marked by 6V.

Case code	$\varnothing D$	L	A	B	C	W	P	a	b	c
D55	4	5.2	4.3	4.3	5.1	0.5-0.8	1.0	1.0	2.6	1.6
E55	5	5.2	5.3	5.3	5.9	0.5-0.8	1.4	1.4	3.0	1.6
F55	6.3	5.2	6.6	6.6	7.2	0.5-0.8	1.9	1.9	3.5	1.6
F60	6.3	5.7	6.6	6.6	7.2	0.5-0.8	1.9	1.9	3.5	1.6
H63	8	6.3	8.3	8.3	9.0	0.5-0.8	2.3	2.3	4.5	1.6
H10	8	10.0	8.3	8.3	9.0	0.7-1.1	3.1	3.1	4.2	2.2
J10	10	10.0	10.3	10.3	11.0	0.7-1.1	4.5	4.5	4.4	2.2
K14	12.5	13.5	13.0	13.0	13.7	1.0-1.3	4.5	4.2	4.0	2.5

### RATINGS OF MVK Series

$V_{DC}$	6.3(0J)		10(1A)		16(1C)	
$\mu F$						
0.1						
0.22						
0.33						
0.47						
1						
2.2						
3.3						
4.7						
10					D55	16

22	D55		21	E55		30	E55		30	
33	E55		36	E55		34	F55		45	
47	E55		36	F55		48	F55		48	
100	F55	F60	56	F60	H63	90	F60	H10	110	180
220	H63		150	H63		150	H10		275	
330	H10		290	135	J10	450	J10		450	
470	J10		460	J10		460	J10		460	
1,000	J10		520	J10		540	K14		550	
1,500	J10		550	K14		620				
2,200	K14		680							

$V_{DC}$ $\mu F$	25(1E)				35(1V)		50(1H)			
0.1							D55		1.3	
0.22							D55		2.6	
0.33							D55		3.2	
0.47							D55		3.8	
1							D55		5.6	
2.2							D55		10	
3.3							D55		14	
4.7					D55	15	E55		19	
10	E55		25	E55		25	F55		29	
22	F55		40	F55		40	H63		70	
33	F55		45	H63		80	H10		140	
47	F60	H63	52	80	H63		140	H10		170
100	H63	H10	135	180	H10		250	J10		310
220	J10		375	J10		375	K14		420	
330	J10		450	K14		480	K14		500	
470	J10		460	K14		520	↑		↑	
1,000	K14		550							
1,500										



2,200						
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Case Code \_\_\_\_\_

Rated ripple Current (mArms/105°C, 120Hz) \_\_\_\_\_

$\mu\text{F}$ \diagdown $V_{\text{DC}}$	160(2C)		200(2D)		250(2E)		400(2G)		450(2W)	
3.3							K14	40	K14	40
4.7					K14	65				
10	J10	45	K14	80	↑	↑				
22	K14	85	K14	85			Rated ripple Current (mArms/105°C, 120Hz)			
33	K14	95					Case code			