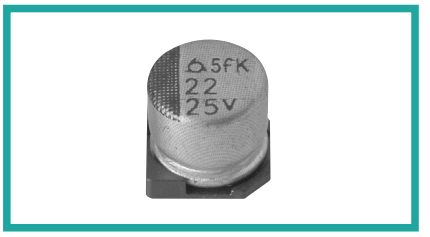
SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS

MVK Series • 105℃ 1,000~2,000Hrs assured.

Solvent-proof

WV ≦ 63VDC



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

MV → MVK

Wide Temp.

SPECIFICATIONS

Item	Characteristics		
Rated Voltage Range	6.3 ~ 450 VDC		
Operating Temperature Range	-40 ~ +105℃		
Capacitance Tolerance	±20%(M)		(at 20℃, 120Hz)
Leakage Current	Rated Voltage(VDC)	6.3~100	160~450
	Max. Leakage current(μA)	0.01CV (μA) or 3μA , whichever is greater. (at 20℃, 2 minutes)	0.04CV+100(μA) (at 20℃, 1 minute)
	Where, C:Nominal capacitance(μF), V:Rated voltage(VDC)		

Dissipation Factor Tanδ(Max.)

Rated voltage(VDC)	6.3	10	16	25	35	50~100	160~250	400~450
ø4~ø6.3	0.30	0.24	0.20	0.16	0.14	0.12	-	-
ø8~ø18	0.40	0.30	0.26	0.16	0.14	0.12	0.15	0.20

(at 20℃, at 120Hz)

Temperature Characteristics (Max. Impedance ratio)

Rated voltage(VDC)	6.3	10	16	25	35	50~100	160~250	400~450
Z(-25℃)/Z(+20℃)	4	3	2	2	2	3	3	6
Z(-40℃)/Z(+20℃)	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℃ after the rated voltage is applied with the following conditions.

ø4~ø6.3:105℃, 1,000 hours, ø8~ø18:105℃, 2,000 hours.

Capacitance change
- ø4~ø6.3 ≦ ±30% of the initial value
- ø8~ø12.5 ≦ ±20% of the initial value

Tanδ
- ø4~ø6.3 ≦ 300% of the initial specified value
- ø8~ø12.5 ≦ 200% of the initial specified value

Leakage current ≦ The initial specified value

Shelf Life

The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for the specified time at 105℃ without voltage applied. 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.

ø4~ø6.3:105℃, 500 hours, ø8~ø18:105℃, 1,000 hours.

Capacitance change
- ø4~ø6.3 ≦ ±25% of the initial value
- ø8~ø12.5 ≦ ±20% of the initial value

Tanδ ≦ 200% of the initial specified value

Leakage current ≦ The initial specified value

Others

Satisfied characteristics W of KS C 6421

PART NUMBERING SYSTEM

MVK 50 VC R47 M D55 TP

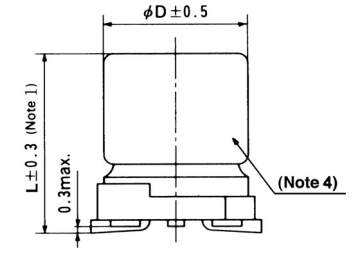
- TP: With tape
- D55: Case code
- M: Capacitance tolerance(±20%)
- R47: Nominal capacitance code
- VC: Lead type
- 50: Rated voltage in volts
- MVK: Series name

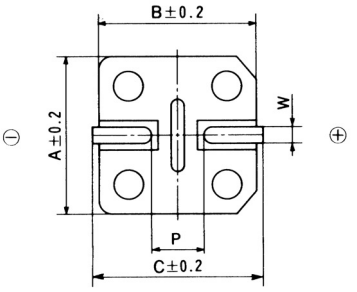
Capacitance	Code
0.1μF	R1
0.47μF	R47
1.0μF	1
4.7μF	4R7
10μF	10
100μF	100

DIMENSIONS OF MVK Series(Type:VC)

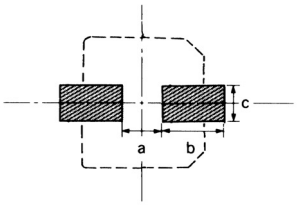
Unit(mm)

DIMENSIONS



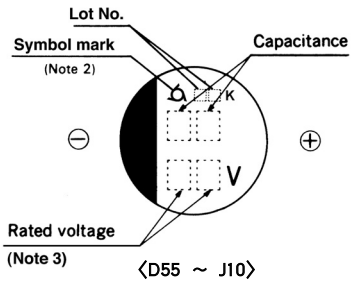


Recommended Solder land on PC board

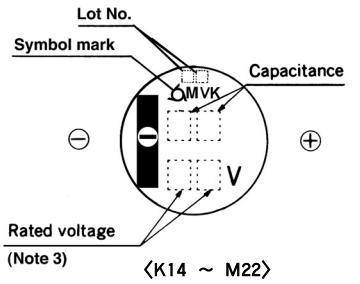


▨ : Solder pad on PC board

MARKING



〈D55 ~ J10〉



〈K14 ~ M22〉

Note 1 : L±0.5 for 8×6.3(H63) ~ 18×21.5(M22)
Note 2 : 4×5.2(D55), 5×5.2(E55) is excluded symbol mark.
Note 3 : 6.3WV is marked by 6V.
Note 4 : Case Color ; Green

Case code	ø 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	8.3	8.3	9.0	0.7-1.1	3.1	3.1	4.2	2.2
J10	10	10	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	4.2	4.0	5.7	2.5
L17	16	16.5	17.0	17.0	18.0	1.0-1.3	6.5	6.0	6.9	2.5
L22	16	21.5	17.0	17.0	18.0	1.0-1.3	6.5	6.0	6.9	2.5
M17	18	16.5	19.0	19.0	20.0	1.0-1.3	6.5	6.0	7.9	2.5
M22	18	21.5	19.0	19.0	20.0	1.0-1.3	6.5	6.0	7.9	2.5

RATINGS OF MVK Series

μF \ Vdc	6.3(0J)		10(1A)		16(1C)		25(1E)		35(1V)		50(1H)		63(1J)		100(2A)	
0.1											D55	1.3	D55	1.3		
0.22											D55	2.6	D55	3.0		
0.33											D55	3.2	D55	4.0		
0.47											D55	3.8	D55	5.0		
1											D55	5.6	D55	8.0		
2.2											D55	10	D55	12		
3.3											D55	14	E55	17		
4.7									D55	15	E55	19	E55	20		
10					D55	16	E55	25	E55	25	F55	29	F60	32		
22	D55	21	E55	30	E55	30	F55	40	F55	40	H63	70	H10	60	H10	90
33	E55	36	E55	34	F55	45	F55	45	H63	80	H10	140	H10	110	J10	120
47	E55	36	F55	48	F55	48	F60 H63	52 80	H63	140	H10	170	H10	130	K14	250
100	F55 F60	56	F60 H63	90	F60 H10	110 180	H63 H10	135 180	H10	250	J10	310	K14	380	K14	380
220	H63	150	H63	150	H10	275	J10	375	J10	375	K14	420	K14	470	M17	750
330	H10	290	J10	450	J10	450	J10	450	K14	480	K14	500	L17	700	M22	980
470	J10	460	J10	460	J10	460	J10	460	K14	520	L17	700	M17	900		
1,000	J10	520	J10	540	K14	550	K14	550	L17	750	M22	1200				
1,500	J10	550	K14	620												
2,200	K14	680	L17	850	M17	1000	M22	1300	M22	1450						
3,300	M17	1000	M17	1100	M17	1200										
4,700	L22	1200	M22	1350												
6,800	M22	1350														

Rated ripple Current(mArms/105°C, 120Hz)
Case code

μF \ Vdc	160(2C)		200(2D)		250(2E)		400(2G)		450(2W)	
3.3							K14	30	K14	40
4.7					K14	65	L17	60	L17	60
10	J10	45	K14	80	L17	100	L17	85	L17	85
22	K14	85	K14	85	L17	180	M22	130	M22	130
33	K14	95	L17	220	M17	230				
47	L17	260	M17	270	M22	280				
68	M17	320	M22	330						
100	L22	380								

Rated ripple Current(mArms/105°C, 120Hz)
Case code