

## Alchip™-MV Series

- Height 5.2 to 10.0mm
- Suitable to fit for downsized equipment
- Solvent resistant type
- RoHS Compliant
- MV series will be discontinued, strongly recommended MVA series

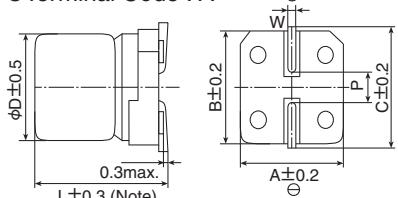


## ◆SPECIFICATIONS

Items	Characteristics																																																																					
Category Temperature Range	-40 to +85°C																																																																					
Rated Voltage Range	4 to 63V <sub>dc</sub>																																																																					
Capacitance Tolerance	$\pm 20\%$ (M) (at 20°C, 120Hz)																																																																					
Leakage Current	$I=0.01CV$ or $3\mu A$ , whichever is greater. Where, I : Max. leakage current ( $\mu A$ ), C : Nominal capacitance ( $\mu F$ ), V : Rated voltage (V) (at 20°C after 2 minutes)																																																																					
Dissipation Factor ( $\tan\delta$ )	<table border="1"> <tr> <td>Rated voltage (V<sub>dc</sub>)</td> <td>4V</td> <td>6.3V</td> <td>10V</td> <td>16V</td> <td>25V</td> <td>35V</td> <td>50V</td> <td>63V</td> </tr> <tr> <td><math>\tan\delta</math> (Max.)</td> <td>D55 to F55</td> <td>0.42</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> </tr> <tr> <td></td> <td>H63 to JA0</td> <td>—</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> </tr> </table> <table border="1"> <tr> <td>Rated voltage (V<sub>dc</sub>)</td> <td>4V</td> <td>6.3V</td> <td>10V</td> <td>16V</td> <td>25V</td> <td>35V</td> <td>50V</td> <td>63V</td> </tr> <tr> <td>Z(-25°C)/Z(+20°C)</td> <td>7</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td><math>\tan\delta</math> (Max.)</td> <td>D55 to F55</td> <td>15</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> </tr> <tr> <td></td> <td>H63 to JA0</td> <td>—</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> </tr> </table>	Rated voltage (V <sub>dc</sub> )	4V	6.3V	10V	16V	25V	35V	50V	63V	$\tan\delta$ (Max.)	D55 to F55	0.42	0.24	0.20	0.16	0.14	0.12	0.10		H63 to JA0	—	0.40	0.30	0.26	0.16	0.14	0.12	Rated voltage (V <sub>dc</sub> )	4V	6.3V	10V	16V	25V	35V	50V	63V	Z(-25°C)/Z(+20°C)	7	4	3	2	2	2	2	2	$\tan\delta$ (Max.)	D55 to F55	15	10	8	6	4	3	3		H63 to JA0	—	10	8	6	4	3	3	(at 20°C, 120Hz)			(at 120Hz)		
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Low Temperature Characteristics (Max. Impedance Ratio)	<table border="1"> <tr> <td>Rated voltage (V<sub>dc</sub>)</td> <td>4V</td> <td>6.3V</td> <td>10V</td> <td>16V</td> <td>25V</td> <td>35V</td> <td>50V</td> <td>63V</td> </tr> <tr> <td>Z(-25°C)/Z(+20°C)</td> <td>7</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td><math>\tan\delta</math> (Max.)</td> <td>D55 to F55</td> <td>15</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> </tr> <tr> <td></td> <td>H63 to JA0</td> <td>—</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> </tr> </table>	Rated voltage (V <sub>dc</sub> )	4V	6.3V	10V	16V	25V	35V	50V	63V	Z(-25°C)/Z(+20°C)	7	4	3	2	2	2	2	2	$\tan\delta$ (Max.)	D55 to F55	15	10	8	6	4	3	3		H63 to JA0	—	10	8	6	4	3	3	(at 120Hz)			(at 120Hz)																													
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Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2,000 hours at 85°C.																																																																					
	<table border="1"> <tr> <td>Capacitance change</td> <td><math>\leq \pm 20\%</math> of the initial value</td> </tr> <tr> <td>D.F. (<math>\tan\delta</math>)</td> <td><math>\leq 200\%</math> of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td><math>\leq</math> The initial specified value</td> </tr> </table>								Capacitance change	$\leq \pm 20\%$ of the initial value	D.F. ( $\tan\delta$ )	$\leq 200\%$ of the initial specified value	Leakage current	$\leq$ The initial specified value																																																								
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Leakage current	$\leq$ The initial specified value																																																																					
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 500 hours at 85°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.																																																																					
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## ◆DIMENSIONS [mm]

## ●Terminal Code : A

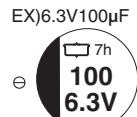


Note : L±0.5 for H63 to JA0

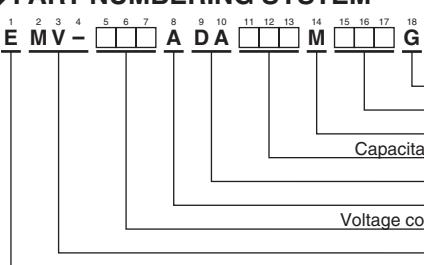
Size code	D	L	A	B	C	W	P
D55 & D60	4	*5.2	4.3	4.3	5.1	0.5 to 0.8	1.0
E55 & E60	5	*5.2	5.3	5.3	5.9	0.5 to 0.8	1.4
F55	6.3	5.2	6.6	6.6	7.2	0.5 to 0.8	1.9
H63	8	6.3	8.3	8.3	9.0	0.5 to 0.8	2.3
HA0	8	10.0	8.3	8.3	9.0	0.7 to 1.1	3.1
JA0	10	10.0	10.3	10.3	11.0	0.7 to 1.1	4.5

\*: L=5.7 for D60 and E60.

## ◆MARKING



## ◆PART NUMBERING SYSTEM



Specifications in this bulletin are subject to change without notice.

## ◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Size code	tanδ	Rated ripple current (mA rms/ 85°C, 120Hz)	Part No.	WV (V <sub>dc</sub> )	Cap (μF)	Size code	tanδ	Rated ripple current (mA rms/ 85°C, 120Hz)	Part No.
4	33	D55	0.42	23	EMV-4R0ADA330MD55G	35	4.7	D55	0.12	15	EMV-350ADA4R7MD55G
	47	D55	0.42	27	EMV-4R0ADA470MD55G		10	E55	0.12	25	EMV-350ADA100ME55G
	100	E55	0.42	46	EMV-4R0ADA101ME55G		22	F55	0.12	40	EMV-350ADA220MF55G
	220	F55	0.42	74	EMV-4R0ADA221MF55G		47	H63	0.14	105	EMV-350ADA470MH63G
6.3	22	D55	0.24	23	EMV-6R3ADA220MD55G		100	HA0	0.14	175	EMV-350ADA101MHA0G
	47	E55	0.24	38	EMV-6R3ADA470ME55G		220	JA0	0.14	265	EMV-350ADA221MJA0G
	100	F55	0.24	60	EMV-6R3ADA101MF55G	50	1.0	D55	0.10	6.2	EMV-500ADA1R0MD55G
	330	H63	0.40	190	EMV-6R3ADA331MH63G		2.2	D55	0.10	10	EMV-500ADA2R2MD55G
	470	HA0	0.40	265	EMV-6R3ADA471MHA0G		3.3	D55	0.10	14	EMV-500ADA3R3MD55G
	1,000	JA0	0.40	400	EMV-6R3ADA102MJA0G		4.7	E55	0.10	19	EMV-500ADA4R7ME55G
10	33	E55	0.20	35	EMV-100ADA330ME55G		10	F55	0.10	29	EMV-500ADA100MF55G
	220	H63	0.30	175	EMV-100ADA221MH63G		33	H63	0.12	95	EMV-500ADA330MH63G
16	10	D55	0.16	17	EMV-160ADA100MD55G		47	HA0	0.12	140	EMV-500ADA470MHA0G
	22	E55	0.16	32	EMV-160ADA220ME55G		100	JA0	0.12	195	EMV-500ADA101MJA0G
	47	F55	0.16	50	EMV-160ADA470MF55G	63	1.0	D60	0.12	7.0	EMV-630ADA1R0MD60G
	220	HA0	0.26	215	EMV-160ADA221MHA0G		2.2	D60	0.12	10	EMV-630ADA2R2MD60G
	330	HA0	0.26	270	EMV-160ADA331MHA0G		3.3	E60	0.12	13	EMV-630ADA3R3ME60G
	470	JA0	0.26	330	EMV-160ADA471MJA0G		10	HA0	0.12	46	EMV-630ADA100MHA0G
25	33	F55	0.14	45	EMV-250ADA330MF55G		22	HA0	0.12	69	EMV-630ADA220MHA0G
	100	H63	0.16	145	EMV-250ADA101MH63G		33	HA0	0.12	85	EMV-630ADA330MHA0G
	330	JA0	0.16	305	EMV-250ADA331MJA0G		47	HA0	0.12	101	EMV-630ADA470MHA0G

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