

A FEATURES

- Low impedance for high frequency
- High voltage capability: 160V~450V
- Long life: 2,000~8,000 hours at 105°C
- High ripple current capability
- Operating Temperature range from -40°C to +105°C (Including Self-heating)
- 260°C reflow peak temperature qualified



B GENERAL SPECIFICATIONS

Item	Performance Characteristics							
Operating Temperature	-40°C ~ +105°C							
Working Voltage Range	160V ~ 450V							
Capacitance Range	1 ~ 100μF							
Capacitance Tolerance	±20% at 120Hz, +20°C							
Leakage Current	I ≤ 0.01CV or 3 (μA)							
	whichever is greater measured after 2 minutes application of rated working voltage at +20°C							
Tan δ (120Hz, +20°C)	Working Voltage (V)	160	200	250	400	420	450	
	Tan δ (Max)	0.20	0.20	0.20	0.24	0.24	0.26	
Low Temperature Characteristics	Impedance ratio max. at 120Hz							
	Rated Voltage (V)	160	200	250	400	420	450	
	Z-25°C / Z+20°C	3	3	3	5	5	5	
	Z-40°C / Z+20°C	6	6	6	6	6	6	
High Temperature Loading	Diameter(mm)	6.3	8	10	12.5	16	18	
	Test time	2000	5000	5000	8000	8000	8000	
	Test Conditions	Rated DC working voltage with rated ripple current at +105°C ±2°C						
	Cap. Change	within ±30% of the initial measured value						
	Tan δ	≤300% of the initial specified value						
	Leakage current	≤Initial specified value						
High Temperature Storage	At +105°C no voltage applied after 1,000 hours and then being stabilized at +20°C the capacitors shall meet the following limits:							
	Cap. Change	within ±30% of the initial measured value						
	Tan δ	≤300% of the initial specified value						
	Leakage current	≤Initial specified value						
Soldering Stability	After reflow process, returned to ambient temperature, the capacitors shall meet the following limits:							
	Cap. Change	within ±10% of the initial measured value						
	Tan δ	≤initial specified value						
	Leakage current	≤Initial specified value						
Ripple Current Multiplier	Frequency	50Hz	120Hz	300Hz	1KHz	10KHz	100KHz	
	Coefficient	0.35	0.50	0.64	0.83	1.00	1.00	

C PART NUMBER SYSTEM

JVD 1V 101 M F 105 000LP0
 ① ② ③ ④ ⑤ ⑥ ⑦

①	Series	②	Voltage Code		
JVD	Series Code		2C- 160V	2D- 200V	2E- 250V
			2G- 400V	W6- 420V	2W- 450V
③	Capacitance Code	⑤	Diameter(Ø) Code		
e.g.	Calculation		E - 6.3mm	F - 8mm	G - 10mm
101	$10 \times 10^1 \mu\text{F} = 100\mu\text{F}$		I - 12.5mm	J - 16mm	K - 18mm
④	Inductance Tolerance	⑥	Height Code		
M	±20%		105 - 10.5mm	125 - 12.5mm	135 - 13.5mm
⑦	Internal Code		165 - 16.5mm		

D DRAWINGS AND DIMENSIONS

Drawing	Marking
	<p>E.g.: JVD Series, 400V, 10uF</p>

Case Code	Dimensions (mm)							
	ΦD	L	A,B	H	I	W	P	K
E105	6.3±0.5	10.5±0.5	6.6	7.8	2.4	0.5~0.8	2.2	0.35±0.15
F105	8.0±0.5	10.5±0.5	8.3	10.0	3.4	0.8~1.1	3.1	0.7±0.2
F125	8.0±0.5	12.5±0.5	8.3	10.0	3.4	0.8~1.1	3.1	0.7±0.2
G105	10.0±0.5	10.5±0.5	10.3	12.0	3.5	0.7~1.3	4.7	0.7±0.2
G125	10.0±0.5	12.5±0.5	10.3	12.0	3.5	0.7~1.3	4.7	0.7±0.2
I135	12.5±0.5	13.5±0.5	13.5	15.0	4.7	1.1~1.4	4.4	0.7±0.2
I165	12.5±0.5	16.5±0.5	13.5	15.0	4.7	1.1~1.4	4.4	0.7±0.2
J165	16.0±0.5	16.5±0.5	17.0	19.0	5.5	1.1~1.4	6.4	0.7±0.2
K165	18.0±0.5	16.5±0.5	19.0	21.0	6.7	1.1~1.4	6.4	0.7±0.2

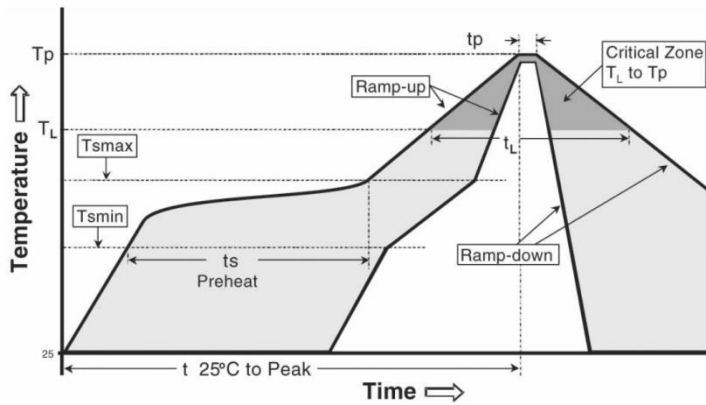
E SPECIFICATIONS

Part Number	Voltage _R	Capacitance	Tolerance	Ripple ¹ _R	ΦD	L	SPQ
/	V	μF	/	mA(rms)	mm	mm	PCS/Reel
JVD2C1R0ME105000LP0	160	1	±20%	25	6.3	10.5	800
JVD2C2R2ME105000LP0	160	2.2	±20%	35	6.3	10.5	800
JVD2C3R3ME105000LP0	160	3.3	±20%	45	6.3	10.5	800
JVD2C4R7ME105000LP0	160	4.7	±20%	52	6.3	10.5	800
JVD2C4R7MF105000LP0	160	4.7	±20%	60	8.0	10.5	500
JVD2C5R6ME105000LP0	160	5.6	±20%	57	6.3	10.5	800
JVD2C6R8ME105000LP0	160	6.8	±20%	60	6.3	10.5	800
JVD2C6R8MF105000LP0	160	6.8	±20%	70	8.0	10.5	500
JVD2C100MF105000LP0	160	10	±20%	90	8.0	10.5	500
JVD2C120MF105000LP0	160	12	±20%	95	8.0	10.5	500
JVD2C150MF105000LP0	160	15	±20%	110	8.0	10.5	500
JVD2C220MG105000LP0	160	22	±20%	150	10.0	10.5	500
JVD2C330MG125000LP0	160	33	±20%	195	10.0	12.5	400
JVD2C470MI135000LP0	160	47	±20%	275	12.5	13.5	200
JVD2C560MI135000LP0	160	56	±20%	300	12.5	13.5	200
JVD2C680MI135000LP0	160	68	±20%	330	12.5	13.5	200
JVD2C101MJ165000LP0	160	100	±20%	500	16.0	16.5	125
JVD2D1R0ME105000LP0	200	1	±20%	22	6.3	10.5	800
JVD2D2R2ME105000LP0	200	2.2	±20%	32	6.3	10.5	800
JVD2D3R3ME105000LP0	200	3.3	±20%	42	6.3	10.5	800
JVD2D4R7ME105000LP0	200	4.7	±20%	50	6.3	10.5	800
JVD2D4R7MF105000LP0	200	4.7	±20%	55	8.0	10.5	500
JVD2D5R6ME105000LP0	200	5.6	±20%	55	6.3	10.5	800
JVD2D6R8ME105000LP0	200	6.8	±20%	55	6.3	10.5	800
JVD2D6R8MF105000LP0	200	6.8	±20%	65	8.0	10.5	500
JVD2D100MF105000LP0	200	10	±20%	85	8.0	10.5	500
JVD2D120MF105000LP0	200	12	±20%	90	8.0	10.5	500
JVD2D150MF125000LP0	200	15	±20%	110	8.0	12.5	400
JVD2D220MG105000LP0	200	22	±20%	140	10.0	10.5	500
JVD2D330MG125000LP0	200	33	±20%	185	10.0	12.5	400
JVD2D470MI135000LP0	200	47	±20%	260	12.5	13.5	200
JVD2D560MI135000LP0	200	56	±20%	280	12.5	13.5	200
JVD2D680MI165000LP0	200	68	±20%	340	12.5	16.5	200
JVD2D101MJ165000LP0	200	100	±20%	480	16.0	16.5	125
JVD2E1R0ME105000LP0	250	1	±20%	22	6.3	10.5	800
JVD2E2R2ME105000LP0	250	2.2	±20%	32	6.3	10.5	800
JVD2E3R3ME105000LP0	250	3.3	±20%	42	6.3	10.5	800
JVD2E4R7ME105000LP0	250	4.7	±20%	50	6.3	10.5	800
JVD2E5R6MF105000LP0	250	5.6	±20%	55	8.0	10.5	500
JVD2E6R8MF105000LP0	250	6.8	±20%	75	8.0	10.5	500
JVD2E6R8MF125000LP0	250	6.8	±20%	85	8.0	12.5	400
JVD2E100MF125000LP0	250	10	±20%	100	8.0	12.5	400
JVD2E120MF125000LP0	250	12	±20%	110	8.0	12.5	400
JVD2E150MG125000LP0	250	15	±20%	150	10	12.5	400
JVD2E220MI135000LP0	250	22	±20%	215	12.5	13.5	200
JVD2E330MI135000LP0	250	33	±20%	260	12.5	13.5	200
JVD2E470MI135000LP0	250	47	±20%	280	12.5	13.5	200
JVD2E560MI165000LP0	250	56	±20%	390	16	16.5	125
JVD2E680MI165000LP0	250	68	±20%	475	16	16.5	125
JVD2E101MK165000LP0	250	100	±20%	620	18	16.5	125
JVD2G1R0ME105000LP0	400	1	±20%	25	6.3	10.5	800

Part Number	Voltage _R	Capacitance	Tolerance	Ripple ¹ _R	ΦD	L	SPQ
/	V	μF	/	mA(rms)	mm	mm	PCS/Reel
JVD2G2R2ME105000LP0	400	2.2	±20%	35	6.3	10.5	800
JVD2G2R2MF105000LP0	400	2.2	±20%	45	8	10.5	500
JVD2G3R3MF105000LP0	400	3.3	±20%	50	8	10.5	500
JVD2G4R7MF105000LP0	400	4.7	±20%	60	8	10.5	500
JVD2G4R7MF125000LP0	400	4.7	±20%	65	8	12.5	400
JVD2G5R6MG105000LP0	400	5.6	±20%	75	10	10.5	500
JVD2G6R8MF125000LP0	400	6.8	±20%	75	8	12.5	400
JVD2G6R8MG105000LP0	400	6.8	±20%	82	10	10.5	500
JVD2G6R8MG125000LP0	400	6.8	±20%	90	10	12.5	400
JVD2G100MG125000LP0	400	10	±20%	110	10	12.5	400
JVD2G120MG125000LP0	400	12	±20%	120	10	12.5	400
JVD2G150MI135000LP0	400	15	±20%	150	12.5	13.5	200
JVD2G220MI165000LP0	400	22	±20%	200	12.5	16.5	200
JVD2G330MJ165000LP0	400	33	±20%	290	16	16.5	125
JVD2G470MK165000LP0	400	47	±20%	345	16	16.5	125
JVD2G560MK165000LP0	400	56	±20%	355	18	16.5	125
JVDW61R0ME105000LP0	420	1	±20%	20	6.3	10.5	800
JVDW62R2ME105000LP0	420	2.2	±20%	30	6.3	10.5	800
JVDW63R3MF105000LP0	420	3.3	±20%	41	8	10.5	500
JVDW64R7MF125000LP0	420	4.7	±20%	53	8	12.5	400
JVDW65R6MF125000LP0	420	5.6	±20%	58	8	12.5	400
JVDW66R8MG105000LP0	420	6.8	±20%	67	10	10.5	500
JVDW6100MG125000LP0	420	10	±20%	90	10	12.5	400
JVDW6120MI135000LP0	420	12	±20%	115	12.5	13.5	200
JVDW6150MI135000LP0	420	15	±20%	130	12.5	13.5	200
JVD2W1R0ME105000LP0	450	1	±20%	20	6.3	10.5	800
JVD2W2R2ME105000LP0	450	2.2	±20%	30	6.3	10.5	800
JVD2W3R3MF105000LP0	450	3.3	±20%	41	8	10.5	500
JVD2W4R7MG105000LP0	450	4.7	±20%	56	10	10.5	500
JVD2W5R6MG105000LP0	450	5.6	±20%	67	10	10.5	500
JVD2W6R8MG105000LP0	450	6.8	±20%	67	10	10.5	500
JVD2W100MI135000LP0	450	10	±20%	105	12.5	13.5	200
JVD2W120MI135000LP0	450	12	±20%	115	12.5	13.5	200
JVD2W150MI135000LP0	450	15	±20%	125	12.5	13.5	200

1. Ripple current measured @ 100KHz at 105°C temperature.
2. Impedance measured @ 100KHz at 25°C temperature.
3. Specifications subject to change without notice please check our website for latest information.

F RECOMMENDED SOLDERING PROFILE



Profile Feature	Recommended Conditions
Average ramp-up rate (Tsmmax to Tp)	3°C/second max.
Preheat	
Temperature Min (Tsmmin)	150°C
Temperature Max (Tsmmax)	200°C
Time (Tsmmin to Tsmmax)(ts)	60-180 seconds
Time maintained above:	
Temperature (Tl)	217°C
Time (tl)	60-150 seconds
Peak Temperature (Tp)	See Table2
Time within 5°C of actual Peak Temperature (tp) ²	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max

Table 1

Package Thickness	Volume mm ³ <350	Volume mm ³ 350 - 2000	Volume mm ³ >2000
< 1.6mm	260°C	260°C	260°C
1.6mm - 2.5mm	260°C	250°C	245°C
>2.5mm	250°C	245°C	245°C

Table 2

1. The above profiles are based on IPC/JEDEC J-STD-020C.
2. Exceeding these conditions may cause lowered product reliability.