

DV Series Chip type

Features

- ◆ Chip type ,Low impedance
- ◆ Chip type with load life of 2000 hours at +105°C
- ◆ Designed for surface mounting on high density PC board
- ◆ Applicable to automatic mounting machine using carrier tape
- ◆ Complied to the RoHS directive
- ◆ For detail specifications, please refer to Engineering Bulletin NO. E173

ZV **Low Impedance** → DV



SMD

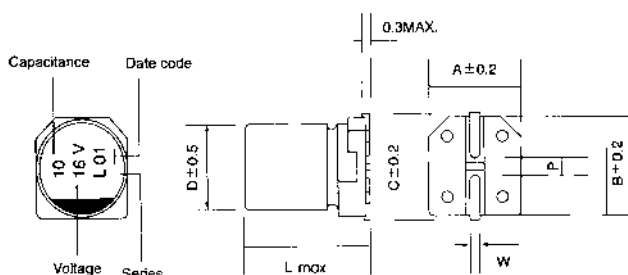
Specifications

Item	Performance Characteristics						
Operating Temperature Range	-55~ +105°C						
Rated Voltage Range	6.3~50 VDC						
Capacitance Range	1 to 1500 μF						
Capacitance Tolerance	±20%(120Hz,+20°C)						
Leakage Current (+20°C,max.)	$I \leq 0.01 CV$ or $3 (\mu A)$ After 2 minutes whichever is greater measured with rated working voltage applied.						
Dissipation Factor (tan δ , at 20°C , 120Hz)	Working voltage(VDC)	6.3	10	16	25	35	50
	D.F. (%) max.	24	19	16	14	14	12
Low Temperature Characteristics (at 120Hz)	Impedance ratio max						
	Working voltage(VDC)	6.3	10	16	25	35	50
	Z-25°C / Z+20°C	2	2	2	2	2	2
	Z-55°C / Z+20°C	8	6	4	4	3	3
Load Life	Test conditions						
	Duration time	:2000 Hrs					
	Ambient temperature	:+105°C					
	Applied voltage	:Rated DC working voltage					
	After test requirement at +20°C :						
	Capacitance change	:Within ±30% of initial value					
	Dissipation factor	:Less than 300% of specified value					
	Leakage current	:Less than specified value					
Shelf Life	Test conditions						
	Duration time	:1000 Hrs					
	Ambient temperature	:+105°C					
	Applied voltage	:None					
	After test requirement at +20°C : Same limits as Load life.						
	Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.						
Resistance to soldering heat	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them at 250°C for 30 seconds.						
	Leakage current	Less than specified value					
	Capacitance change	Within ±10% of initial value					
	tan δ	Less than specified value					

Multiplier for Ripple Current vs. Frequency

CAP(μF)\Frequency(Hz)	60(50)	120	400	1K	10K	50K-100K
CAP ≤ 10	0.47	0.59	0.76	0.85	0.97	1.0
10 < CAP ≤ 100	0.52	0.65	0.80	0.89	0.97	1.0

Diagram of Dimensions:(unit:mm)



φD	L	A	B	C	W	P
4	5.5	4.3	4.3	4.9	0.5~0.8	1.0
5	5.5	5.3	5.3	5.9	0.5~0.8	1.4
6.3	5.5	6.6	6.6	7.2	0.5~0.8	2.2
6.3	7.7	6.6	6.6	7.2	0.5~0.8	2.2
8	6.5	8.3	8.3	9.0	0.5~0.8	2.3
8	10.5	8.3	8.3	9.0	0.7~1.1	3.1
10	10.5	10.3	10.3	11.0	0.7~1.1	4.5

Case Size

φ DxL(mm)

WV (SV) Cap (μF)	6.3 (8)			10 (13)			16 (20)			25 (32)			35 (44)			50 (63)		
	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance
1.0																4X5.5	55	4.5
2.2																4X5.5	55	4.5
3.3													4X5.5	80	2.8	4X5.5	55	4.5
4.7													4X5.5	85	2.3	4X5.5	55	4.5
6.8										4X5.5	70	2.8	4X5.5	88	2.2	5X5.5	75	3.8
10							4X5.5	80	2.2	4X5.5	85	2.1	4X5.5	90	2.0	5X5.5	95	2.8
15							4X5.5	85	2.0	5X5.5	125	1.9	5X5.5	140	1.2	6.3X5.5	140	1.6
22	4X5.5	75	2.2	4X5.5	80	2.2	4X5.5	90	1.98	5X5.5	145	1.2	5X5.5	155	1.1	6.3X5.5	150	1.3
							5X5.5	140	1.2	6.3X5.5	160	1.15	6.3X5.5	170	1.05			
27	4X5.5	79	1.98	5X5.5	125	1.9	5X5.5	170	0.74	6.3X5.5	200	0.62	6.3X5.5	210	0.6	6.3X7.7	180	1.2
33	4X5.5	82	1.9	4X5.5	90	1.85	6.3X5.5	185	0.6	5X5.5	160	1.05	6.3X5.5	230	0.54	6.3X7.7	190	0.71
	5X5.5	130	1.3	5X5.5	150	1.2				6.3X5.5	220	0.58	8X6.5	260	0.51	8X6.5	200	0.7
47	4X5.5	86	1.88	5X5.5	165	1.1	5X5.5	195	1.05	6.3X5.5	220	0.56	6.3X5.5	240	0.53	6.3X7.7	230	0.7
	5X5.5	150	1.1	6.3X5.5	180	0.59	6.3X5.5	210	0.58	6.3X7.7	230	0.54	8X6.5	250	0.49	8X6.5	240	0.69
56	5X5.5	150	1.10	6.3X5.5	210	0.57	6.3X5.5	220	0.56	6.3X5.5	230	0.54	6.3X7.7	250	0.49	8X10.5	300	0.52
68	5X5.5	160	0.9	6.3X5.5	220	0.55	6.3X5.5	230	0.54	6.3X5.5	240	0.48	6.3X7.7	265	0.4	8X10.5	320	0.5
	6.3X5.5	220	0.55				8X6.5	240	0.50	8X6.5	260	0.45						
100	5X5.5	170	0.8	6.3X5.5	240	0.53	6.3X5.5	255	0.52	6.3X7.7	290	0.38	6.3X7.7	300	0.38	8X10.5	350	0.46
	6.3X5.5	230	0.53							8X6.5	300	0.36	8X10.5	420	0.28			
150	6.3X5.5	235	0.51	6.3X5.5	250	0.49	6.3X7.7	265	0.45	8X10.5	480	0.25	8X10.5	510	0.24	10X10.5	600	0.25
	8X6.5	250	0.48	8X6.5	260	0.47	8X6.5	270	0.44									
220	6.3X5.5	240	0.48	6.3X7.7	270	0.44	6.3X7.7	275	0.43	8X10.5	530	0.22	8X10.5	570	0.21	10X10.5	650	0.23
	6.3X7.7	260	0.45	8X6.5	285	0.40	8X6.5	285	0.41									
330	6.3X7.7	275	0.36	8X10.5	500	0.25	8X10.5	550	0.25	8X10.5	570	0.2	10X10.5	650	0.15			
	8X6.5	290	0.34															
470	8X10.5	450	0.28	8X10.5	550	0.25	8X10.5	590	0.22	10X10.5	650	0.15						
680	8X10.5	500	0.25	10X10.5	680	0.2	10X10.5	720	0.16									
1000	8X10.5	530	0.20	10X10.5	740	0.15												
	10X10.5	570	0.17															
1200	10X10.5	600	0.16															
1500	10X10.5	650	0.13															

Ripple Current (mA, rms) at 105°C 100KHz

Max Impedance (Ω) at 20°C 100 KHz