



PVH Series

- Ultra Low ESR, High ripple current, High reliability, long life
- Rated voltage range : 2.5 to 10 Vdc
- 1000 hours at 125°C
- Suitable for DC – DC converters, voltage regulators and decoupling applications for computer motherboards



SPECIFICATIONS

Items	Characteristics									
Operating Temperature Range	-55 ~ +125°C									
Capacitance Tolerance	± 20 % (20°C、120Hz)									
Dissipation Factor (tanδ)	0.12 (max.) (20°C、120Hz)									
Surge Voltage	Rated voltage × 1.15V									
Leakage Current	I = 0.2CV . After 2 minutes application of rated voltage. ≤ 6.3 φ I = 0.5CV I= Leakage Current (μA) C= Nominal Capacitance (μF) V= Rated Voltage (If the leakage current is not stabilized, apply rated voltage for 120 minutes at 105°C)									
Equivalent series resistance (ESR)	Please see the attached standard products list.									
High temperature & Low temperature Characteristic	<table border="1"> <tr> <td>Z(-55°C)/Z(20°C)</td> <td>0.75 ~ 1.25</td> <td rowspan="2">(100KHZ) (20°C)</td> </tr> <tr> <td>Z(+125°C)/Z(20°C)</td> <td>0.75 ~ 1.25</td> </tr> </table>	Z(-55°C)/Z(20°C)	0.75 ~ 1.25	(100KHZ) (20°C)	Z(+125°C)/Z(20°C)	0.75 ~ 1.25				
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Durability	<p>After applying the rate voltage for 1000 hours at 125°C and then being stabilized at 20°C, capacitors shall meet the following limits.</p> <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±20% of the initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 150% of the specified value.</td> </tr> <tr> <td>ESR</td> <td>Not more than 150% of the specified value.</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> </table>		Capacitance Change	Within ±20% of the initial value.	Dissipation Factor	Not more than 150% of the specified value.	ESR	Not more than 150% of the specified value.	Leakage Current	Not more than the specified value.
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High temperature & high humidity (Constant)	<p>After storing for 1000 hours at 60°C、90~95%R.H.</p> <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±20% of the initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 150% of the specified value.</td> </tr> <tr> <td>ESR</td> <td>Not more than 150% of the specified value.</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> </table>		Capacitance Change	Within ±20% of the initial value.	Dissipation Factor	Not more than 150% of the specified value.	ESR	Not more than 150% of the specified value.	Leakage Current	Not more than the specified value.
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Resistance to Soldering heat Flow method (260±5°C × 10s) Test method : Please see the page 8 (No. 3)	<table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±5% of the initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than the specified value.</td> </tr> <tr> <td>ESR</td> <td>Not more than the specified value.</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> </table>		Capacitance Change	Within ±5% of the initial value.	Dissipation Factor	Not more than the specified value.	ESR	Not more than the specified value.	Leakage Current	Not more than the specified value.
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Surge Voltage Test	<p>The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltage specified at 105°C for 30 seconds through a protective resistor(R=1kΩ) and discharge for 5 minutes 30 seconds.</p> <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±20% of the initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 150% of the specified value.</td> </tr> <tr> <td>ESR</td> <td>Not more than 150% of the specified value.</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> </table>		Capacitance Change	Within ±20% of the initial value.	Dissipation Factor	Not more than 150% of the specified value.	ESR	Not more than 150% of the specified value.	Leakage Current	Not more than the specified value.
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Leakage Current	Not more than the specified value.									
Failure Rate	1% per 1000 hours maximum (Confidence level 60% at 105°C)									



PVH Series

STANDARD PRODUCTS

Size Code	Rated voltage V.DC	Nominal capacitance (μ F)	Max. permissible ripple current (mA r.m.s) (-55 to 105°C、100KHz to 300KHz)		ESR (m Ω) Max. 20°C, 100KHz	Part No.
			105°C < To \leq 125°C	To \leq 105°C		
0605	10	56	540	1700	45	10PVH560M0605
	6.3	82	540	1700	45	6PVH820M0605
	4	150	580	1800	40	4PVH151M0605
0809	10	120	820	2600	35	10PVH121M0809
	6.3	150	820	2600	35	6PVH151M0809
	6.3	220	820	2600	35	6PVH221M0809
	4	330	820	2600	35	4PVH330M0809
1010	10	270	1180	3800	25	10PVH271M1010
	10	330	1180	3800	25	10PVH331M1010
	6.3	330	1180	3800	25	6PVH331M1010
	6.3	470	1180	3800	25	6PVH471M1010
	4	470	1180	3800	25	4PVH471M1010
	4	560	1180	3800	25	4PVH561M1010
	4	680	1180	3800	25	4PVH681M1010
0812	10	330	1270	4000	17	10PVH331M0812
	6.3	470	1350	4300	15	6PVH471M0812
	4	560	1450	4600	13	4PVH561M0812
1012	10	560	1670	5300	13	10PVH561M1012
	6.3	820	1740	5500	12	6PVH821M1012
	4	1200	1740	5500	12	4PVH122M1012