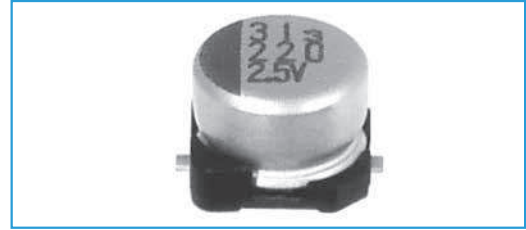


## Chip Type

- GREEN CAP
- SMD
- Low ESR
- 105°C 1000hours
- Anti-cleaning solvent

- 4.0mm height
- Super low ESR and high ripple current are realized.
- Guaranteed 105°C, 1000 hours.



Marking color : Blue print



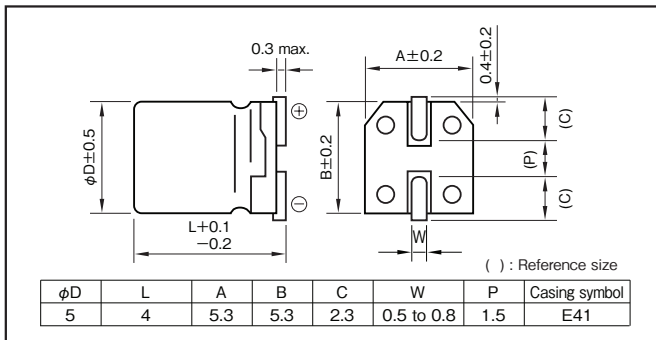
## Specifications

Item	Performance										
Category temperature range (°C)	-55 to +105										
Tolerance at rated capacitance (%)	±20 (20°C,120Hz)										
Leakage current (μA) *Note	Less than 700μA (after 2 minutes) (20°C)										
Tangent of the loss angle (tanδ)	Less than 0.12 (20°C,120Hz)										
Characteristics at high and low temperature	<table border="1"> <tr> <td>Impedance ratio (max.)</td> <td>Z-25°C/Z+20°C</td> <td>1.15</td> </tr> <tr> <td></td> <td>Z-55°C/Z+20°C</td> <td>1.25</td> </tr> </table> (100kHz)	Impedance ratio (max.)	Z-25°C/Z+20°C	1.15		Z-55°C/Z+20°C	1.25				
Impedance ratio (max.)	Z-25°C/Z+20°C	1.15									
	Z-55°C/Z+20°C	1.25									
Endurance (105°C) (Applied ripple current)	<table border="1"> <tr> <td>Test time</td> <td>1000 hours</td> </tr> <tr> <td>Leakage current</td> <td>The initial specified value or less</td> </tr> <tr> <td>Percentage of capacitance change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tangent of the loss angle</td> <td>150% or less of the initial specified value</td> </tr> <tr> <td>ESR change</td> <td>150% or less of the initial specified value</td> </tr> </table>	Test time	1000 hours	Leakage current	The initial specified value or less	Percentage of capacitance change	Within ±20% of initial value	Tangent of the loss angle	150% or less of the initial specified value	ESR change	150% or less of the initial specified value
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Percentage of capacitance change	Within ±20% of initial value										
Tangent of the loss angle	150% or less of the initial specified value										
ESR change	150% or less of the initial specified value										
Bias Humidity 60°C, 90 to 95%RH	<table border="1"> <tr> <td>Test time</td> <td>500 hours</td> </tr> <tr> <td>Leakage current</td> <td>The initial specified value or less</td> </tr> <tr> <td>Percentage of capacitance change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tangent of the loss angle</td> <td>150% or less of the initial specified value</td> </tr> <tr> <td>ESR change</td> <td>150% or less of the initial specified value</td> </tr> </table>	Test time	500 hours	Leakage current	The initial specified value or less	Percentage of capacitance change	Within ±20% of initial value	Tangent of the loss angle	150% or less of the initial specified value	ESR change	150% or less of the initial specified value
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Percentage of capacitance change	Within ±20% of initial value										
Tangent of the loss angle	150% or less of the initial specified value										
ESR change	150% or less of the initial specified value										
Characteristics of applied surge voltage	The capacitors shall be subject to 1000 cycles each consisting of charge with the surge voltage specified at 105°C for 30 seconds through a protective resistor (Rc=1kΩ) in 6 minutes per cycle. Surge voltage : 1.15 times of rated voltage <table border="1"> <tr> <td>Leakage current</td> <td>The initial specified value or less</td> </tr> <tr> <td>Percentage of capacitance change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tangent of the loss angle</td> <td>150% or less of the initial specified value</td> </tr> <tr> <td>ESR change</td> <td>150% or less of the initial specified value</td> </tr> </table>	Leakage current	The initial specified value or less	Percentage of capacitance change	Within ±20% of initial value	Tangent of the loss angle	150% or less of the initial specified value	ESR change	150% or less of the initial specified value		
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Percentage of capacitance change	Within ±20% of initial value										
Tangent of the loss angle	150% or less of the initial specified value										
ESR change	150% or less of the initial specified value										
Failure tare	0.5% per 1000 hours maximum (Confidence level 60% at 105°C)										

\*Note : If any doubt arises, measure the leakage current after following voltage application treatment.  
Voltage application treatment : DC rated voltage are applied to the capacitors for 120 minutes at 105°C.

## Outline Drawing

Unit : mm



- Soldering conditions are described on page 15.
- Land pattern size are described on page 13.
- The taping specifications are described on page 16.

Part numbering system (example : 2.5V220μF)								
PV3	—	2R5	V	221	M	E41	—	( )
Series code		Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol		Taping symbol

**Standard Ratings**

Rated voltage (V) Rated capacitance (µF)	Item	2.5			6.3		
		Case	ESR	Rated ripple current	Case	ESR	Rated ripple current
		φ D × L (mm)	(mΩ max.)	(mA <sub>rms</sub> )	φ D × L (mm)	(mΩ max.)	(mA <sub>rms</sub> )
150	—	—	—	5×4.0	25	2700	
220	5×4.0	25	3300	—	—	—	

(Note) Rated ripple current : 105°C , 100kHz ; ESR : 20°C , 100kHz

ALUMINUM

POLYMER  
HYBRID

105°C