

# Conductive Polymer Hybrid Aluminum Electrolytic Capacitors HVL,HTL series

Code in front of series have been extracted from product code, which describes the segment of products, such as type and features.

## Specifications

Item	Performance										
Category temperature range (°C)	-55 to +125										
Tolerance at rated capacitance (%)	±20 (20°C, 120Hz)										
Leakage current (μA) (max.)	0.01CV or 3 whichever is larger (after 2 minutes) C : Rated capacitance (μF) ; V : Rated voltage (V) (20°C)										
Tangent of loss angle (tan δ)	<table border="1" style="margin: auto;"> <tr> <td style="text-align: center;">Rated voltage (V)</td> <td style="text-align: center;">25</td> <td style="text-align: center;">35</td> <td style="text-align: center;">50</td> <td style="text-align: center;">63</td> </tr> <tr> <td style="text-align: center;">tan δ (max.)</td> <td style="text-align: center;">0.14</td> <td style="text-align: center;">0.12</td> <td style="text-align: center;">0.10</td> <td style="text-align: center;">0.08</td> </tr> </table> (20°C, 120Hz)	Rated voltage (V)	25	35	50	63	tan δ (max.)	0.14	0.12	0.10	0.08
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Characteristics at high and low temperature	Impedance ratio (max.) <table border="1" style="margin: auto;"> <tr> <td style="text-align: center;">Z-25°C/Z+20°C</td> <td style="text-align: center;">1.5</td> </tr> <tr> <td style="text-align: center;">Z-55°C/Z+20°C</td> <td style="text-align: center;">2.0</td> </tr> </table> (100kHz)	Z-25°C/Z+20°C	1.5	Z-55°C/Z+20°C	2.0						
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Endurance (125°C) (Applied ripple current)	<table border="1" style="margin: auto;"> <tr> <td style="text-align: center;">Test time</td> <td style="text-align: center;">8000 hours</td> </tr> <tr> <td style="text-align: center;">Leakage current</td> <td style="text-align: center;">The initial specified value or less</td> </tr> <tr> <td style="text-align: center;">Percentage of capacitance change</td> <td style="text-align: center;">Within ±30% of initial value</td> </tr> <tr> <td style="text-align: center;">Tangent of the loss angle</td> <td style="text-align: center;">200% or less of the initial specified value</td> </tr> <tr> <td style="text-align: center;">ESR change</td> <td style="text-align: center;">200% or less of the initial specified value</td> </tr> </table>	Test time	8000 hours	Leakage current	The initial specified value or less	Percentage of capacitance change	Within ±30% of initial value	Tangent of the loss angle	200% or less of the initial specified value	ESR change	200% or less of the initial specified value
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Shelf life (125°C)	Test time : 1000hours ; other items are same as the endurance. Voltage application treatment : According to JIS C5101-4 4.1.										