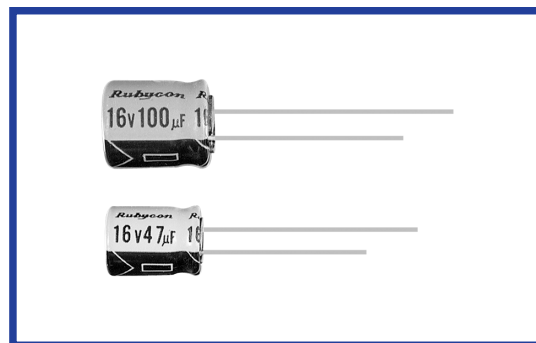


**TWL SERIES**
**Low Leakage Current**
**◆FEATURES**

•RoHS compliance.


**◆SPECIFICATIONS**

Items	Characteristics																																																
Category Temperature Range	-40~+85°C																																																
Rated Voltage Range	6.3~50V.DC																																																
Capacitance Tolerance	±20% (20°C, 120Hz)																																																
Leakage Current(MAX)	I=0.002CV or 0.4µA whichever is greater. (After 2 minutes application of rated voltage) I=(µA) Leakage Current      C=(µF) Rated Capacitance      V=(V) Rated Voltage																																																
(tanδ) Dissipation Factor(MAX)	<table border="1"> <tr> <td colspan="8">〈L=7〉</td> </tr> <tr> <td>Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>(20°C, 120Hz)</td> </tr> <tr> <td>tanδ</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td></td> </tr> <tr> <td colspan="8">〈L≥11〉</td> </tr> <tr> <td>Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>(20°C, 120Hz)</td> </tr> <tr> <td>tanδ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td></td> </tr> </table> <p>When rated capacitance is over 1000µF, tanδ shall be added 0.02 to the listed value with increase of every 1000µF.</p>	〈L=7〉								Rated Voltage	6.3	10	16	25	35	50	(20°C, 120Hz)	tanδ	0.24	0.20	0.16	0.14	0.12	0.10		〈L≥11〉								Rated Voltage	6.3	10	16	25	35	50	(20°C, 120Hz)	tanδ	0.22	0.19	0.16	0.14	0.12	0.10	
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Endurance	After life test with rated ripple current at conditions stated in the table below, the capacitors shall meet the following requirements. <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±25% of the initial value.</td> <td>Case Size</td> <td>(hrs) Life Time</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value.</td> <td>L=7</td> <td>1000</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> <td>L≥11</td> <td>2000</td> </tr> </table>	Capacitance Change	Within ±25% of the initial value.	Case Size	(hrs) Life Time	Dissipation Factor	Not more than 200% of the specified value.	L=7	1000	Leakage Current	Not more than the specified value.	L≥11	2000																																				
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Low Temperature Stability Impedance Ratio(MAX)	<table border="1"> <tr> <td>Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>(120Hz)</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td></td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>8</td> <td>6</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td></td> </tr> </table>	Rated Voltage	6.3	10	16	25	35	50	(120Hz)	Z(-25°C)/Z(20°C)	4	3	2	2	2	2		Z(-40°C)/Z(20°C)	8	6	6	4	4	3																									
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**◆MULTIPLIER FOR RIPPLE CURRENT**

Frequency coefficient

(Hz) Frequency		60(50)	120	500	1k	10k≤
Coefficient	0.1~1µF	0.50	1.00	1.20	1.30	1.50
	2.2~4.7µF	0.65	1.00	1.20	1.30	1.50
	10~47µF	0.80	1.00	1.20	1.30	1.50
	100~1000µF	0.80	1.00	1.10	1.15	1.20
	2200µF	0.80	1.00	1.05	1.10	1.15

**◆OPTION**

	Code
PET Sleeve	EFC

**◆PART NUMBER**

□□□	TWL	□□□□□	M	□□□	□□	D×L
Rated Voltage	Series	Rated Capacitance	Capacitance Tolerance	Option	Lead Forming	Case Size

