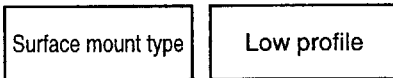


Series: **TES**

Surface Mount Type Tantalum Solid Electrolytic Capacitors

Type: **T**

Japan



**■ Features**

- Low profile  
Height: H=1.2 mm max.  
Product line up of size Z (2.0x1.25x1.2)

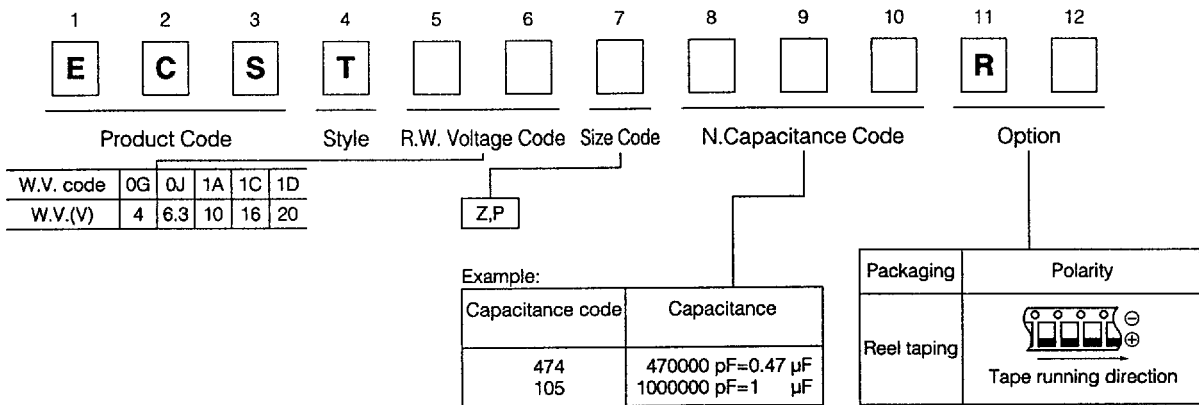
**■ Recommended Applications**

- Handy headphones stereo, pager, camcorder.

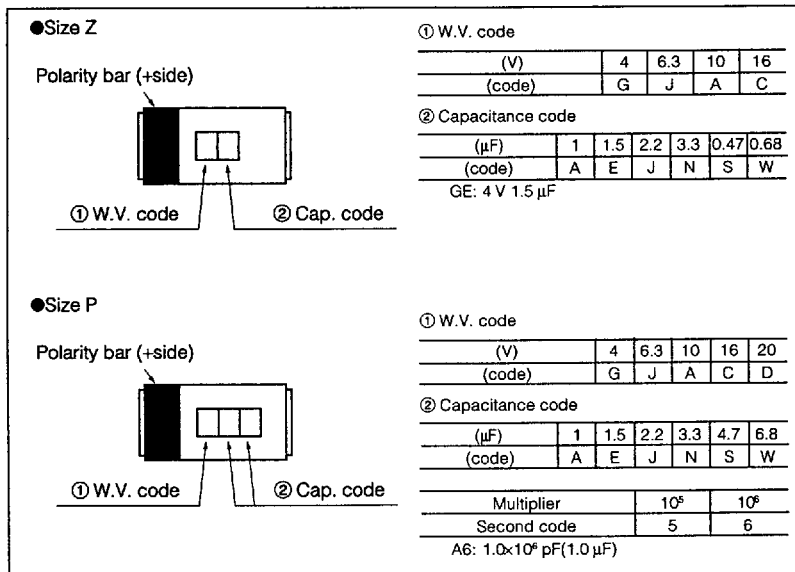
**■ Specifications**

Operating Temp. Range	-55 to +125 °C						
Rated W.V. Range	4 to 20 V.DC						
Nominal Cap. Range	0.1 to 3.3 μF						
Capacitance Tolerance	±20 % (120 Hz/+20 °C)						
DC Leakage Current	I ≤ 0.5 (μA) after 2 minutes application of rated working voltage at +20 °C						
tan δ	Size P: ≤ 3.3 μF ..... 0.04 max. (120 Hz/+20 °C) Size Z: ≤ 2.2 μF ..... 0.10 max.						
Resistance to Soldering Heat	The capacitor shall withstand dipping into solder for 5±1 seconds at +260±5 °C						
Moisture Resistance	<p>After 500 hours exposure at +40 °C and 90 to 95 % R.H. without load, the capacitor shall meet the following limits.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>±10 % of initial measured value</td> </tr> <tr> <td>tan δ</td> <td>≤ Initial specified value</td> </tr> <tr> <td>DC leakage current</td> <td>≤ Initial specified value</td> </tr> </table>	Capacitance change	±10 % of initial measured value	tan δ	≤ Initial specified value	DC leakage current	≤ Initial specified value
Capacitance change	±10 % of initial measured value						
tan δ	≤ Initial specified value						
DC leakage current	≤ Initial specified value						
Endurance	<p>After 2000 hours application of rated DC working voltage at +85 °C or derated voltage at +125 °C, the capacitor shall meet the following limits.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>±10 % of initial measured value</td> </tr> <tr> <td>tan δ</td> <td>≤ Initial specified value</td> </tr> <tr> <td>DC leakage current</td> <td>≤ 125 % of initial specified value</td> </tr> </table>	Capacitance change	±10 % of initial measured value	tan δ	≤ Initial specified value	DC leakage current	≤ 125 % of initial specified value
Capacitance change	±10 % of initial measured value						
tan δ	≤ Initial specified value						
DC leakage current	≤ 125 % of initial specified value						

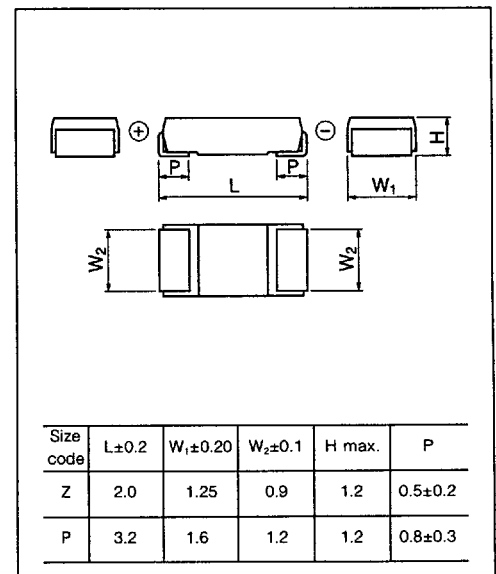
### Explanation of Part Numbers



### Marking



### Dimensions in mm (not to scale)



### Case size

W.V.(V.DC)	4 (0G)	6.3 (0J)	10 (1A)	16 (1C)	20 (1D)
Cap.(μF)					
0.10 (104)					P
0.15 (154)					P
0.22 (224)					P
0.33 (334)					P
0.47 (474)				Z	P
0.68 (684)				P, Z	P
1.0 (105)			P, Z	P	
1.5 (155)		P, Z	P		
2.2 (225)	P, Z	P			
3.3 (335)	P				

Note: 1. ( ) shows W.V. and capacitance code.  
 2. When selecting W.V., see the page 153.  
 3. Other rating upon request (voltage, capacitance, tolerance, size)