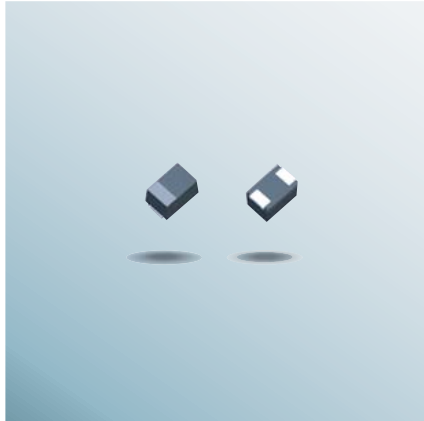


# Bottom Electrode High Capacitance Tantalum Capacitors

## TCS Series - M Case (0603 [1608]\*)



## The industry's first\* 4V/100µF capacitor in the 0603 (1608)\* size

### Product Outline


A high efficiency package design is utilized for a thinner, smaller form factor with higher capacitance. Ideal for compact sets requiring noise removal in power supply and audio coupling circuits, such as mobile phones, digital cameras/camcorders, and portable audio players.

\* : inch(mm)  
\* ROHM 11/2009 Survey

### ■ New package structure contributes to greater compactness, a lower profile, and higher capacitance

The new package type allows for a greater tantalum element that existing bottom electrode products and up to 3x the capacitance as conventional models (TCT Series).

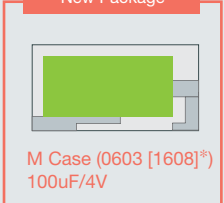
**Existing Bottom Electrode Type**



M Case (0603 [1608]\*)  
33uF/4V

→

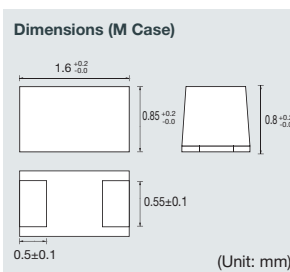
**New Package**



M Case (0603 [1608]\*)  
100uF/4V

3 times the capacitance

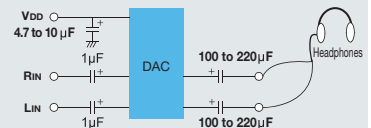
\* : inch (mm)



### Applications

- Mobile Phones
- Digital Cameras/Camcorders
- Portable Audio Players
- And other electronics requiring greater compactness and thinness

### Audio Coupling Circuit



### Product Lineup

| Capacitance Code | Capacitance (µF) | Rated DC Voltage (V) / Voltage Code |        |          |         |         |         |  |
|------------------|------------------|-------------------------------------|--------|----------|---------|---------|---------|--|
|                  |                  | 2.5<br>e                            | 4<br>g | 6.3<br>j | 10<br>A | 16<br>C | 20<br>D |  |
| a                | 10 (106)         |                                     |        |          |         | M       | P       |  |
| e                | 15 (156)         |                                     |        |          |         |         |         |  |
| j                | 22 (226)         |                                     |        |          | M       | P       |         |  |
| n                | 33 (336)         |                                     |        |          |         |         |         |  |
| s                | 47 (476)         |                                     |        | M        | P       |         |         |  |
| w                | 68 (686)         |                                     |        |          |         |         |         |  |
| ā                | 100 (107)        |                                     | M      | P        |         |         |         |  |
| ē                | 150 (157)        |                                     |        |          |         |         |         |  |
| ĵ                | 220 (227)        |                                     | P      |          |         |         |         |  |
| ñ                | 330 (337)        | P                                   |        |          |         |         |         |  |

P Case (0805 [2012]\*)  
\* : inch (mm)

### Product Specifications

#### TCS Series - M Case (0603 [1608]\*)

| Rated Voltage (V) | Capacitance (µF) | tand at 120Hz [25°C] (%) | Leakage Current at 25°C [5 min] (µA) | ESR at 100kHz (Ω) | Part No.   |
|-------------------|------------------|--------------------------|--------------------------------------|-------------------|------------|
| 4                 | 100              | 40                       | 80                                   | 4                 | TCSM0G107x |
| 6.3               | 47               | 40                       | 29.7                                 | 4                 | TCSM0J476x |
| 10                | 22               | 30                       | 11.0                                 | 5                 | TCSM1A226x |
| 16                | 10               | 20                       | 8.0                                  | 6                 | TCSM1C106x |

#### TCS Series - P Case (0805 [2012]\*)

| Rated Voltage (V) | Capacitance (µF) | tand at 120Hz [25°C] (%) | Leakage Current at 25°C [5 min] (µA) | ESR at 100kHz (Ω) | Part No.   |
|-------------------|------------------|--------------------------|--------------------------------------|-------------------|------------|
| 2.5               | 330              | 40                       | 83                                   | 3                 | TCSP0E337x |
| 4                 | 220              | 40                       | 88                                   | 3                 | TCSP0G227x |
| 6.3               | 100              | 40                       | 63                                   | 3                 | TCSP0J107x |
| 10                | 47               | 30                       | 24                                   | 4                 | TCSP1A476x |
| 16                | 22               | 30                       | 18                                   | 4                 | TCSP1C226x |
| 20                | 10               | 20                       | 10                                   | 6                 | TCSP1D106x |

x=Capacitance Tolerance (M: ±20%)

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The content specified in this document is correct as of 9th November, 2009.