

- Last Revision Date :December.28.2009
- Date :January 05 .2010

- Supplier :Samsung electro-mechanics
- Product : Tantalum capacitor
- Samsung P/N : **TCSCS0G336MBAR**
- User Part No :
- Description : CAP,TANTAL,33 μ F,4V, \pm 20%,3528-19

1. Samsung Part Number

TC SCS 0G 336 M B A R
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Tantalum Capacitor	TC
② Series	SCS
③ Rated Voltage	4V
④ Capacitance	33 μ F
⑤ Capacitance tolerance	\pm 20%
⑥ Case size code	3528-19 L: 3.5 \pm 0.2 mm W: 2.8 \pm 0.2 mm H: 1.9 \pm 0.2 mm
⑦ Packing code	7" reel

2. Reliability Test and Judgment Condition 1

Item	Performance	Test condition
Capacitance	Within specified tolerance	120Hz, maximum 1.0Vrms, maximum 1.5Volt D.C, at 25 $^{\circ}$ C
Tan δ (DF)	Within specified value	120Hz, maximum 1.0Vrms, maximum 1.5Volt D.C, at 25 $^{\circ}$ C
Impedance(Z) & ESR	Within specified value	100kHz, maximum 1.0Vrms, maximum 1.5Volt D.C, at 25 $^{\circ}$ C
Leakage current	Within specified value	The rated DC voltage shall be applied to terminals across the test capacitor charge Time: 5 min.
Temperature Characteristics	"-55 $^{\circ}$ C : Δ C/C -10~0% "+85 $^{\circ}$ C : Δ C/C 0~10% "+125 $^{\circ}$ C : Δ C/C 0~15%	(From -55 $^{\circ}$ C to 125 $^{\circ}$ C,
Adhesion Strength	No peeling shall be occur on the terminal electrode	1005mm size : 2N, for 10 \pm 1 sec. 1608~7343mm size : 5N, for 10 \pm 1 sec.
Electrode Strength	Within specified tolerance Tan δ , LC : initial spec.	Bending to the limit (3mm) with 1.0mm/sec.
Solder ability	More than 95% of terminal surface is to be soldered newly	SnAg3.0Cu0.5 solder :245 \pm 5 $^{\circ}$ C, 3 \pm 0.3sec (preheating : 80~120 $^{\circ}$ C for 10~30sec.)
Resistance to Soldering heat	Capacitance change : within \pm 15% Tan δ , LC : initial spec.	Solder pot : 260 \pm 5 $^{\circ}$ C, 10 \pm 1sec.
Vibration Test	Capacitance change : within \pm 5% Tan δ , LC : initial spec.	Amplitude : 1.5mm From 10Hz to 55Hz (return : 1min.) 2hours ' 3 direction (x, y, z)
Moisture Resistance	Capacitance change : within \pm 10% Tan δ , LC : initial spec.	40 \pm 2 $^{\circ}$ C, 90~95%RH, 500+8/-0hrs
High Temperature Resistance	Capacitance change : within \pm 10% Tan δ : initial spec. LC : 125% or less specified initial value	With the rated voltage Max. operating temperature 2000/-0hrs
Temperature Cycling	Capacitance change : within \pm 5% Tan δ , LC : initial spec.	1 cycle condition (Min. operating temperature \rightarrow 25 $^{\circ}$ C \rightarrow Max. operating temperature \rightarrow 25 $^{\circ}$ C) 5 cycle test

3. Recommended Soldering method

Reflow (Reflow Peak Temperature : 260 \pm 5 $^{\circ}$ C, 10sec. Max)

With Pb-free products, if used under 235 $^{\circ}$ C, the quality confirmation must be needed.

4. Ratings & Part Number Reference

Part Number	Capacitance	Leakage Current	DF %	ESR Ω
TCSCS0G336MBAR	33 μ F	1.3 μ A	8%	3.5 Ω