

PRODUCT SPECIFICATION

C u s t o m e r : _____
P r o d u c t N a m e : _____ **Silicon Capacitor** _____
P a r t N O : _____ FSC0201D103M0016 _____
I s s u e D a t e : _____

Prepared	Checked	Customer Check
ChenTT	Zelig	

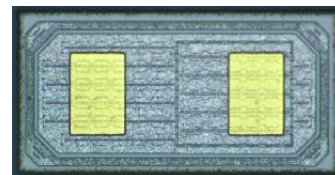
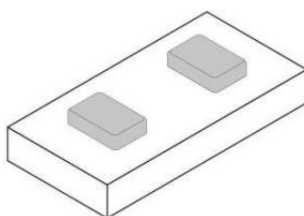
Silicon Capacitor – Horizontal Dual Pad0201M 10nF BV16V

Features

- High reliability
- Ultra high stability (temperature, voltage)
- Low leakage current (high insulation resistance)
- Suitable with lead free reflow soldering
- High operating temperature
- Low ESL and low ESR

Typical Applications

- SONET
- High speed digital logic
- Microwave /millimeter system
- High volumetric efficiency
- Broadband test equipment



Product Information

Product Name	Package Finishing	Description
FSC0201D103M0016	Ni 6um, Au 0.06um	10nF/0201M/BV 16V –Horizontal Dual Pad – 0.62 x 0.32 x 0.10 mm

Electrical Characteristics

Symbol	Parameters	Test Conditions	Min.	Typ.	Max.	Unit
C	Capacitance value	@25°C, 1.0MHz, Vbias= 0V, Vac= 0.2Vrms	-	10	-	nF
ΔC^P	Capacitance tolerance	@25°C	-15		15	%
T ^{OP}	Operating temperature		-55	25	150	°C
ΔC^T	Capacitance temperature variation	@-55°C to 150°C, 1.0MHz, Vbias= 0V, Vac= 0.2Vrms	-	65	-	ppm/°C
RV ^{DC}	Rated voltage		-	-	6.4	V ^{DC}
BV	Break down voltage	@25 °C, <50mA, 1~5s	16	-	-	V
ΔC^{VDC}	Capacitance voltage variation	From 0 V to RV ^{DC} , @25°C, 1.0MHz	-	-	-0.05	%/V ^{DC}
IR	Insulation resistor	@RV ^{DC} , 25°C, 60s, <50mA	10	-	-	GΩ
F ^{C-3dB}	Cut-off frequency at 3dB	@25°C	-	70	-	GHz
IL	Insertion Loss	@ 20GHz, 25°C	-	0.1	-	dB
		@ 40GHz, 25°C	-	0.2	-	dB
		@ 60GHz, 25°C	-	0.5	-	dB
RL	Return Loss	@ 70GHz, 25°C	10	-	-	dB
ESD	HBM stress	AEC-Q101-001	2.0	-	-	kV

Characteristic Curve

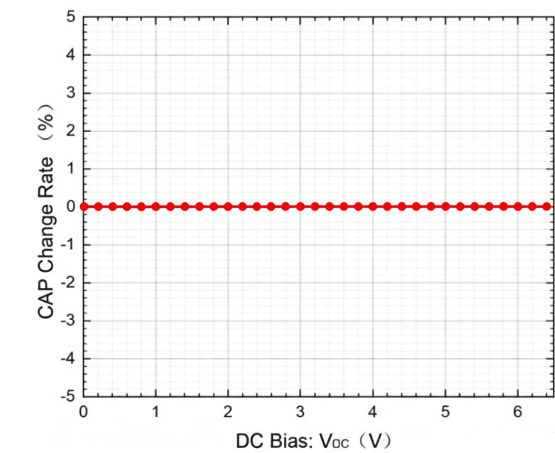


Fig1. DC Bias Characteristics

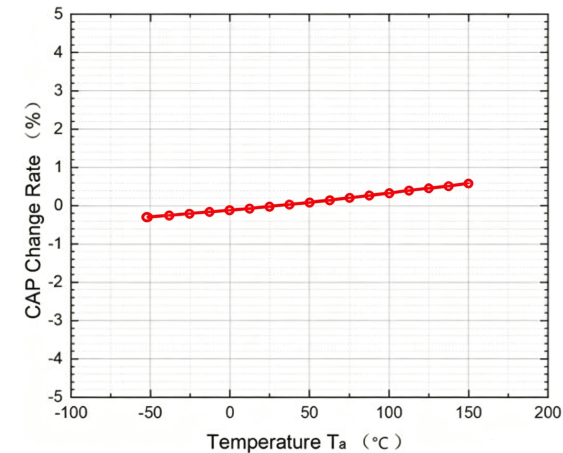


Fig2. Temperature Characteristics

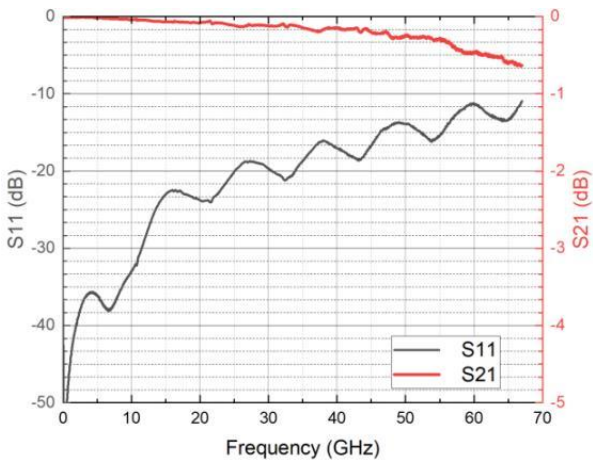


Fig3. Model of S-parameters

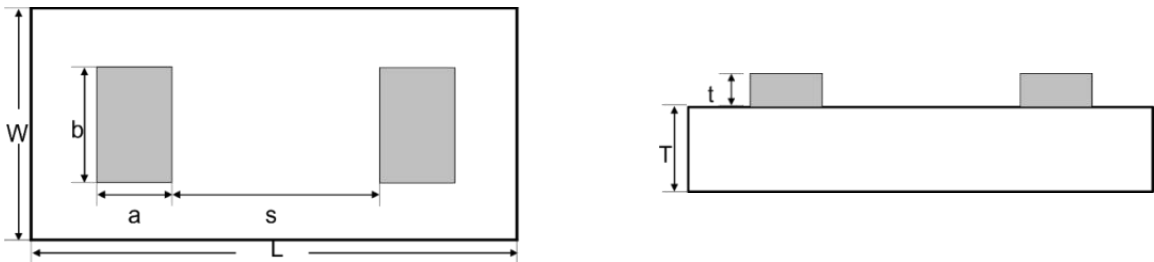
Pad Metallization

As a standard offering, this surface-mount silicon capacitor is supplied with pre-applied solder bumps. For custom requirements, the device can be ordered with alternative pad finishes, which include SAC305 (Type 6) alloy, electroplated copper, hard gold, or aluminum metallization.



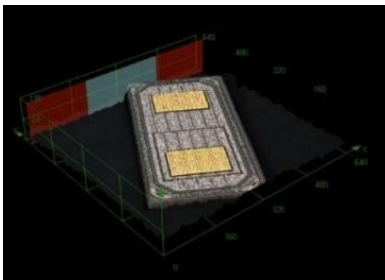
Package outline

The product is delivered as a bare silicon die.

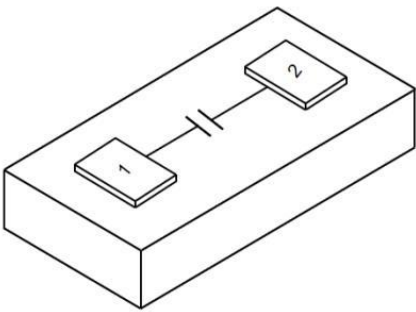


Dimensions and tolerances

	L (mm)	W (mm)	T (mm)	a (mm)	b(mm)	s(mm)	t(mm)
Component dimension	0.62 ±0.02	0.32 ±0.02	0.10±0.06	0.10	0.15	0.20	0.006



Isometric view



Pin configuration

Package format

Tape and Reel:

Each die is loaded into the tape pocket with its active (bumped) side facing the tape bottom. The identification mark on each die is aligned to the sprocket hole side of the tape carrier.

