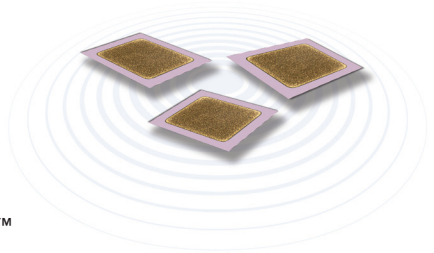


MIS Chip Capacitors for Hybrid Circuit Applications

Features























- Readily available from stock
- High reliability silicon oxide–nitride dielectric
- Low loss—typically 0.04 dB in a 50 Ω system
- Operation through 26 GHz
- Wide temperature operation
- Available lead (Pb)-free, RoHS-compliant, and Green™



Description

Skyworks MIS Chip Capacitors are available in a wide range of sizes and capacitance values. They are frequently used in applications requiring DC blocking, RF bypassing, or as a fixed capacitance tuning element in filters, oscillators, and matching networks. The devices have a dielectric composed of thermally grown silicon dioxide over which a layer of silicon nitride is deposited. This dielectric possesses a low temperature coefficient of capacitance and very high insulation resistance. The devices also exhibit excellent long-term stability making them suitable for high-reliability applications. The capacitors have a high dielectric breakdown which permits the use of thin dielectrics resulting in large capacitance per unit area. The temperature coefficient is less than 50 ppm/°C, and operation is suitable from -65 °C to 200 °C. Compared to ceramic capacitors, Skyworks MIS chip capacitors offer higher Q, and a lower insertion loss of 0.04 dB, in a 50 Ω system. Insulation resistance is greater than 105 M Ω . To accommodate high-volume automated assembly methods, wafers can be supplied on expanded film frame. To reduce cost, chips can be supplied packaged in vials with sample testing only. Packaging in waffle packs with 100% electrical test and visual inspection is available.

MIS Chip Capacitors

Part Number	Capacitance Value (pF) \pm 20%	Size (mils)
 SC00080912	0.8	12 x 12
 SC00120912	1.2	12 x 12
 SC00180912	1.8	12 x 12
 SC00260912	2.6	12 x 12
 SC00380912	3.8	12 x 12
 SC00560912	5.6	12 x 12
 SC00680912	6.8	12 x 12
 SC00820710	8.2	10 x 10
 SC00821518	8.2	18 x 18
 SC01000710	10	10 x 10
 SC01000912	10	12 x 12
 SC01001518	10	18 x 18
 SC01500912	15	12 x 12
 SC01501518	15	18 x 18
 SC02201518	22	18 x 18
 SC03301518	33	18 x 18
 SC04701518	47	18 x 18
 SC06801518	68	18 x 18
 SC10002430	100	30 x 30
 SC33303440	333	40 x 40
 SC50004450	500	50 x 50
 SC99906068	1000	68 x 68

 Skyworks Green™ products are lead (Pb)-free, Restriction of Hazardous Substances (RoHS)-compliant, conform to the EIA/EICTA/JEITA Joint Industry Guide (JIG) Level A guidelines, and are free from antimony trioxide, and brominated flame retardants.