

## Embedded & Wirebond Silicon Capacitor

The IPDiA Technology features high reliability, up to 10 times better than alternative capacitor technologies & eliminates cracking phenomena.

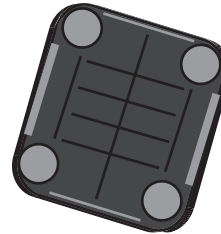
Silicon Capacitor Technology also offers a very stable capacitor value over the full operating voltage & temperature range, with a high and stable insulation resistance.

This silicon based technology is RoHS compliant and compatible with lead free reflow soldering process.

### Key Applications

- Any Demanding Applications, such as Medical, Aerospace, Automotive Industrial.
- Devices with Battery Operations
- High Reliability Applications
- Supply Decoupling / Filtering of Active Device
- High Temperature Applications
- Volume Limited Applications

**EMSC0303 10nF (50V)**  
**935.142.620.510**



### Key Features

- Ultra Low Profile (100µm)
- Ultra High Stability of Capacitance Value;
  - Temperature  $< \pm 0.5\%$  (-55 to +150°C)
  - Voltage  $< 0.1\%$  / V
  - Negligible Capacitance Loss through Ageing
- High Reliability
- Low Leakage Current down to 100pA
- High Operating Temperature (up to 150°C)

### Part Number

<b>935.132.</b>	<b>B. 2</b>	<b>S.</b>	<b>U.</b>	<b>XX</b>
	↓	↓	↓	↓
ie. 100nF/0404 case (EMSC type) → 935.121.42F.610	<b>Breakdown</b>	<b>Size:</b>	<b>Unit:</b>	<b>Value</b>
	<b>Voltage:</b>	<b>F = 0303 G = 0302</b>	<b>0 = 10f</b>	<b>5 = 1n</b>
	<b>1 = 20V</b>	<b>H = 0202 C = 0503</b>	<b>1 = 0.1p</b>	<b>6 = 10n</b>
	<b>4 = 11V</b>	<b>I = 0101 V = 0402</b>	<b>2 = 1p</b>	<b>7 = 0.1u</b>
	<b>6 = 50V</b>	<b>S = 0404 Y = 0201</b>	<b>3 = 10p</b>	<b>8 = 1u</b>
	<b>7 = 30V</b>	<b>V = 0504 X = 2016</b>	<b>4 = 0.1n</b>	<b>9 = 10u</b>

Parameters	Value
Capacitance Range	390pF to 4.7µF
Capacitance Tolerances	±15%
Operating Temperature Range	-55°C to 150°C
Storage Temperatures	-70°C to 165°C
Temperature Coefficient	$< \pm 1\%$ , from -55°C to +150°C
Breakdown Voltage (BV)	30V, 11V
Capacitance Variation Vs. RVDC	0.1% / V (from 0V to RVDC)
Equivalent Serial Inductor (ESL)	Max 100pH
Equivalent Serial Resistor (ESR)	Max 0.1Ω
Insulation Resistance	100GΩ min @ 3V, 25°C
Ageing	Negligible, $< 0.001\%$ / 1000h
Reliability	FIT $< 0.017$ parts / billion hours
Capacitor Height	Max 100µm