

Embedded & Wirebond Extreme Temperature Silicon Capacitor

The IPDiA Technology features a Capacitor Integration Capability (up to 250nF/mm²) which allows a capacitance value similar to X8R dielectric, but with better electrical performances than COG/NP0 dielectrics.

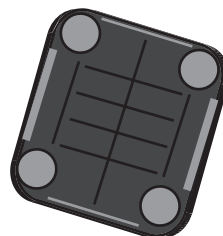
This technology also offers high reliability, up to 10 times better than alternative capacitor technologies.

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

Key Applications

- All Applications up to 250°C, such as Downhole & Defence Industries.
- High Reliability Applications
- Decoupling / Filtering / Charge Pump (ie. Temperature Sensors, Motor Management)
- Replacement of X8R and COG Dielectrics
- Downsizing

EXSC0505 220nF
935.125.42H.622



Key Features

- Ultra High Operating Temperature up to 250°C
- Low Profile (250µm)
- High Stability of Capacitance Value;
 - Temperature <±1.5% (-55 to +250°C)
 - Voltage < 0.1 % / V
 - Negligible Capacitance Loss through Ageing
- High Reliability
- Low Leakage Current down to 100pA
- Aluminium Pad Finish

Part Number

935.132.	B. 2	S.	U.	XX
	↓ Breakdown	↓ Size:	↓ Unit:	↓ Value
ie. 100nF/0404 case (EXSC type) → 935.125.42F.610	Voltage: 4 = 11V 7 = 30V	F = 0404 G = 0605 H = 0505 C = 0202 I = 0302 V = 1612 S = 1208 Y = 1616 V = 1216 X = 2016	0 = 10f 5 = 1n 1 = 0.1p 6 = 10n 2 = 1p 7 = 0.1u 3 = 10p 8 = 1u 4 = 0.1n 9 = 10u	

Parameters	Value
Capacitance Range	390pF to 4.7µF
Capacitance Tolerances	±15%
Operating Temperature Range	-55°C to 250°C
Storage Temperatures	-70°C to 265°C
Temperature Coefficient	<±1.5%, from -55°C to +250°C
Breakdown Voltage (BV)	11V, 30V
Capacitance Variation Vs. RVDC	0.1% /V (from 0 V to RVDC)
Equivalent Serial Inductor (ESL)	Max 100pH
Equivalent Serial Resistor (ESR)	Max 0.1Ω
Insulation Resistance	50GΩ min @ 3V, 25°C 10GΩ min @ 3V, 250°C
Ageing	Negligible, < 0.001% / 1000h
Reliability	FIT < 0.017 parts / billion hours
Capacitor Height	Max 250µm