SOLAR PRO. **Programmable capacitors**

What is a ncd2100 digital programmable capacitor?

IXYS Integrated Circuits NCD2100 Digital Programmable Capacitors feature an EEPROM-based, digitally programmable variable capacitor that provides capacitive offset trimming for capacitance-sensitive circuits.

Are there digitally programmable capacitance standards?

Abstract: NIST has produced several digitally programmable capacitance standardsbased on a modification of a fixed commercial fused-silica capacitance standard.

How many programmable capacitance values are there?

There are 32programmable capacitance values ranging from 6.4pF to 13.3pF in 0.22pF increments (Table 1). The quartz dielectric capacitance is highly stable and exhibits a very low volt-age coefficient. It has virtually no dielectric absorption and has a very low temperature drift coefficient (<33ppm/°C).

What is a digitally tunable capacitor (DTC)?

pSemi's Digitally Tunable Capacitor (DTC) is a variable capacitor controlled with a digital interface. The digital Serial Interface (SPI or I²C) is used to control CMOS FETs that connect and disconnect fixed High-Q MIM Capacitors to obtain difference capacitance values.

What is the quality factor of a trimmable capacitor?

Since the capacitors have the multiplexer series resis-tance associated with them, the quality factor of the trimmable capacitors is not high. For example, a 10pF capacitor only has a theoretical Q of about 10 at 315MHz with 5 series resistance.

What is a sec-ond capacitor?

The sec-ond capacitor (CR) is used as a reference capacitance that does not vary with the sensed function. In most applications, it is needed to detect the difference between these capacitance values. Due to manufactur-ing tolerances, there are normally offsets between CM and CR, which can easily be nulled out by the FLECAP as shown in Figure 4.

Find solid state relays, IGBTs, MOSFETs, optocouplers, programmable capacitors, gate drivers, and LED drivers made by IXYS and sold by Littelfuse. Digitally programmable capacitors can optimize the performance of OXCO oscillators and capacitive sensors by controlling the release of stored charges.

3 ???· NCD2100 Digital Programmable Capacitors IXYS Integrated Circuits NCD2100 Digital Programmable Capacitors feature an EEPROM-based, digitally programmable variable capacitor that provides capacitive offset trimming for capacitance-sensitive circuits. Programming the non-volatile EEPROM register value or implementing on-demand capacitance value ...

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Qorvo offers a family of programmable capacitor arrays used in a variety of RF applications including tunable filters, matching networks, phase shifters and frequency sources. Products come in either a single tunable cap or a multiple tunable cap configuration in ...

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Capacitor arrays may contain 1, 4 or 5 capacitors. They vary in capacitance, i.e. how much energy they can store. Capacitance ranges from 10 picofarads (pF) to 470 nanofarads (nF) (1nF = 1000pF). They vary in voltage, from 4 to 200 DC volts (V dc). Show. Filters 34 Results. Brand. Capacitance. Voltage. Mounting Type. Dielectric. Tolerance . Series. Package/Case. ...

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