



Product Overview

TCP-3039H: Passive Tunable Integrated Circuits (PTIC), 3.9 pF

For complete documentation, see the data sheet

Product Description

ON Semiconductor's PTICs have excellent RF performance and power consumption, making them suitable for any smartphone or radio application. The fundamental building block of our PTIC product line is a tunable material called ParaScan™, based on Barium Strontium Titanate (BST). PTICs have the ability to change their capacitance from a supplied bias voltage generated by the Control IC.

The 3.9 pF PTICs are available as wafer-level chip scale packages (WLCSP) and in QFN packages for easy mounting directly on printed circuit boards.

Features

- High tuning range and operation up to 20 V
- Usable frequency range: from 700 MHz to 2.7 GHz
- High quality factor (Q) for low loss
- High power handling capability
- Compatible with PTIC Control IC TCC-103
- WLCSP package: 0.722 x 1.029 x 0.611 mm (10 pillar)
- QFN package: 1.200 x 1.600 x 0.950 mm
- QFN: MSL-2 Moisture Sensitivity Level (per J-STD-020)
- Pb-Free and RoHS compliant

Applications

- Multi-band, multi-standard, advanced and simple smartphones
- Active antennas
- Tunable antenna matching networks
- Tunable RF filters

End Products

- Smartphone

Part Electrical Specifications

Product	Compliance	Status	C @ $V_{bias} = 2\text{ V Typ}$ (pF)	C @ $V_{bias} = 20\text{ V Typ}$ (pF)	Tuning Range 2 - 20 V Typ	Tuning Range 20 - 2 V Typ	Q @ 700 MHz, 10 V	Q @ 2.4 GHz, 10 V	f_o MHz	Package Type
TCP-3039H-QT	Pb-free Halide free	Active	3.9	1.03	3.8	3.6	90	60	700-2700	QFN-6

For more information please contact your local sales support at www.onsemi.com

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