

TDSW050A2T

DC-50 GHz Absorptive GaAs SPDT Ku-band Switch for Space Applications



Functional Overview

The Teledyne e2v HiRel TDSW050A2T is a wide band, absorptive, single pole, double throw (SPDT) Switch for L through Ku-band applications (DC to 50 GHz).

The switch features insertion loss of -3 dB (typ) and greater than 40 dB Isolation up to 30 GHz. The input power for 1dB compression is 25 dBm typical. The switch operates on +5V/-5V supplies with minimal dc power consumption and is controlled using TTL-compatible voltage levels.

The die is fabricated using a robust 0.15 μm InGaAs pHEMT technology. The switch will be available in both space screened die form and an alternative 4 mm x 4 mm hermetic sealed QFN package with space level screening.

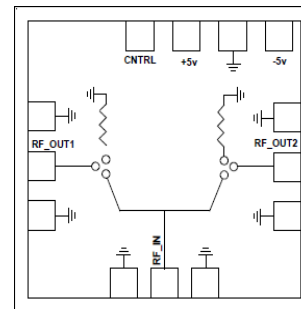
Features

- Frequency Range: DC-50 GHz
- Low Insertion Loss: -3 dB(Max)
- Switching Time < 50 nS
- Isolation: >40 dB
- Input & Output Return Loss: > 15 dB
- Input P1dB: 25dBm
- 0.15u InGaAs pHEMT Technology
- Available in die or 4 x 4mm hermetic QFN pkg
- Die Size: 1.5 mm x 1.5 mm x 0.1 mm
- Radiation Tolerance (TID): 100 krad (min)

Orderable Detail

Part Number	Description	Packaging
TDSW050A2T-98	EM die for evaluation	Gel Pack
TDSW050A2T-99	Flight qualified die	Gel Pack

Functional Block Diagram



Typical Performance

