

# TDSW050A2T

DC-50 GHz Absorptive GaAs SPDT Q-band Switch for Industrial Applications



## Functional Overview

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

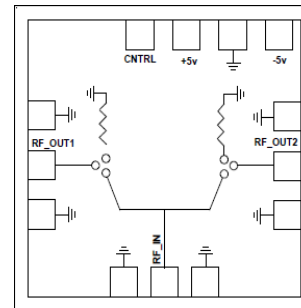
The switch features insertion loss of -3 dB (typ) and greater than 40 dB Isolation up to 30 GHz. The input power for 1dB compression is 25 dBm typical. The switch operates on +5V/-5V supplies with minimal dc power consumption and is controlled using TTL-compatible voltage levels.

The die is fabricated using a robust 0.15  $\mu\text{m}$  InGaAs pHEMT technology. The switch will be available in both screened die form and an alternative 2 mm x 2 mm chipscale flip chip plastic HVCSP package.

## Orderable Detail

Part Number	Description	Packaging
TDSW050A2T-98	Sample die for evaluation	Die
TDSW050A2T-99	Production qualified die	Die
TDSW050A2T-77	2mm X 2mm Chipscale Plastic flip chip package	HVCSP

## Functional Block Diagram



## 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
- 0.15 $\mu\text{m}$  InGaAs pHEMT Technology
- Available in die or 2 x 2mm HVCSP Plastic pkg
- Die Size: 1.5 mm x 1.5 mm x 0.1 mm
- -40 C to 85 C Operation

## Typical Performance

