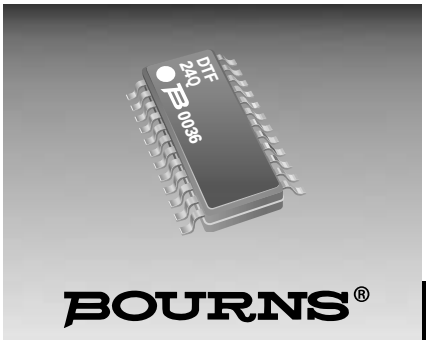


BOURNS®

Features

- Combined EPP/ECP parallel port terminator and filter with an integrated diode array
- Complete interface solution - two packages replace 61 discrete elements
- Nine termination channels per package
- Supports IEC 61000-4-2 ESD specification requirements†

Applications

- Bi-directional EPP/ECP parallel port communications
- Personal computer peripherals with 1284 EPP/ECP interface
- Ideal for space-constrained designs

Thin Film On Silicon 2DTF 1284 Terminator/Filter with Integrated ESD Array

General Information

The Model 2DTF Series IEEE 1284 terminator/filter is a multi-functional single device interface for IEEE EPP/ECP designs. In addition to termination and filtering, the Model 2DTF offers 15 KV (per Human Body model) of ESD protection and is specifically designed to meet the requirements of ESD system specification IEC 61000-4-2.

This highly integrated product is well-suited for use in space-constrained applications such as PC notebooks and motherboards, NT servers, engineering workstations, and portable battery powered devices. It is also useful in peripheral products which are designed to communicate through the EPP/ECP parallel port such as inkjet and laser printers, portable/removable drives, scanners, digital cameras, tape back-ups, LANs and other communication interfaces.

Electrical Specifications

Resistor Tolerance .....±10 %
Resistor Power Dissipation
.....100 mW @ 70 °C
Capacitor Tolerance.....±20 %
Capacitor Breakdown Voltage.....100 V
Maximum Operating Voltage (Vcc).....6.0 V
Max. Leakage Current @ Max. Vcc.....1 µA @25 °C
Diode Power Rating.....20 mW/diode
Forward Voltage (Vf)
@ If = 1 mA.....< 0.9 V
@ If = 10 mA.....< 1.5 V
Reverse Breakdown Voltage (RV)
@ IR = 10 uA @ 70 °C.....> 6 ± 0.5 V
@ IR = 1 uA @ 25 °C.....> 6 ± 0.5 V
Signal Clamp Voltages
Positive Clamp.....6 V max.
Negative Clamp .....-6 V max.

Environmental Specifications

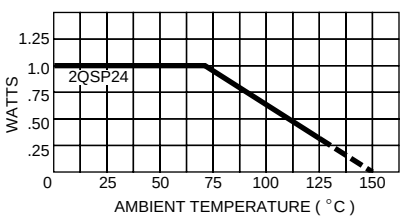
Operating Temperature.-55 °C to +125 °C
Storage Temp. Range...-65 °C to +150 °C

Physical Specifications

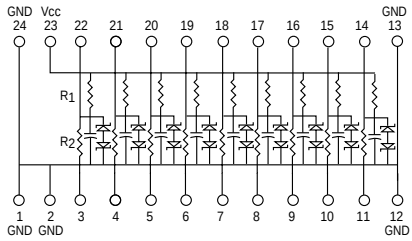
Standard Packages and Pin Counts
QSOP.....24 Pin

Dispensing
QSOP.....3,500 pcs./13 " reel
56 pcs./tube

QSOP Package Power Temperature Derating Curve

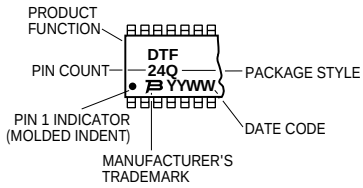


Package Schematic



Typical Part Marking

Represents total content. Layout may vary.



How To Order

2 DTF-V01 M-Q 24 R

Product Class
Thin-Film-on-Silicon

Product Function
DTF = IEEE 1284 Terminator w/Integrated Diodes

Value Code
(Refer to Standard RC Value Table)

Standard Grade

	R Tol.	C Tol.
M =	±10 %	±20 %

Standard Package Style
Q = QSOP

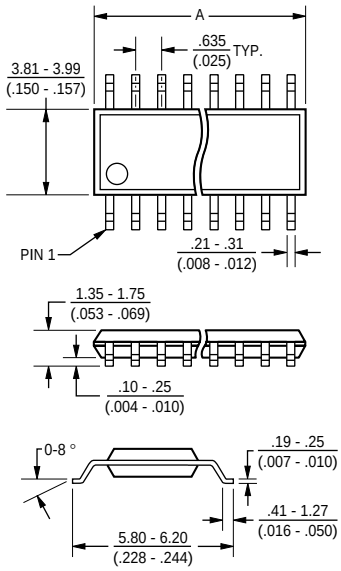
Pin Count
Q = 24

Dispensing
R= Reel
T= Tube

Standard RC Values

Value Code	R1 Value (ohms)	R2 Value (ohms)	C1 Value (pF)	Part Number (Tape & Reel)	Part Number (Tubes)
V01	1 K	33	180	2DTF-V01M-Q24R	2DTF-V01M-Q24T

QSOP Package Dimensions



Model	A
2QSP24	8.56 - 8.74 (.337 - .344)

Governing dimensions are in mm. Dimensions in parentheses are in inches and are approximate.
JEDEC Reference Number MO-137.

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www.bourns.com

† Note: IEC 61000-4-2 ESD test performance is measured at the systems level and system designs, enclosure shielding and other conventional ESD control measures usually influence the results of these tests. Testing on the component level serves as an indicator that the system passes a specific compliance step, but does not ensure that the system passes at that level. The Model 2DTF device, therefore, can support successful implementation of the IEC 61000-4-2 system level ESD standard.

09/02
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Specifications are subject to change without notice.