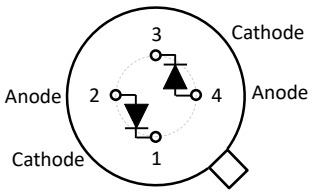
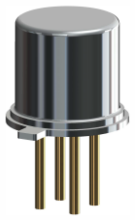
DPAD1, DPAD2 Dual PicoAmp Diode

Features

- InterFET N0001H Geometry
- Low Leakage: 0.5pA Typical
- Low Capacitance: 0.8pF Typical
- RoHS Compliant
- SMT, TH, and Bare Die Package options.

TO-72 Bottom View





Applications

- High Impedance Protection Circuits
- Low Power Battery Circuitry
- High Impedance Diode Switching

Description

The -45V InterFET DPAD1 and DPAD2 are targeted for low power and high impedance applications. Leakages are typically 0.5pA at room temperatures. The DPAD series houses two parts per package. The TO-72 package is hermetically sealed and suitable for military applications.

Product Summary

Parameters		DPAD1 Min	DPAD2 Min	Unit
BV_R	Breakdown Reverse Voltage	-45	-45	V
I_R	Reverse Current	-1 (Max)	-2 (Max)	pA
V_F	Forward Voltage Drop	1.5 (Max)	1.5 (Max)	V

Ordering Information Custom Part and Binning Options Available

Part Number	Description	Case	Packaging
DPAD1; DPAD2	Through-Hole	TO-72	Bulk
DPAD1COT; DPAD2COT	Chip Orientated Tray (COT Waffle Pack)	COT	400/Waffle Pack
DPAD1CFT; DPAD2CFT	Chip Face-up Tray (CFT Waffle Pack)	CFT	400/Waffle Pack

Electrical Characteristics

Maximum Ratings (@ T_A = 25°C, Unless otherwise specified)

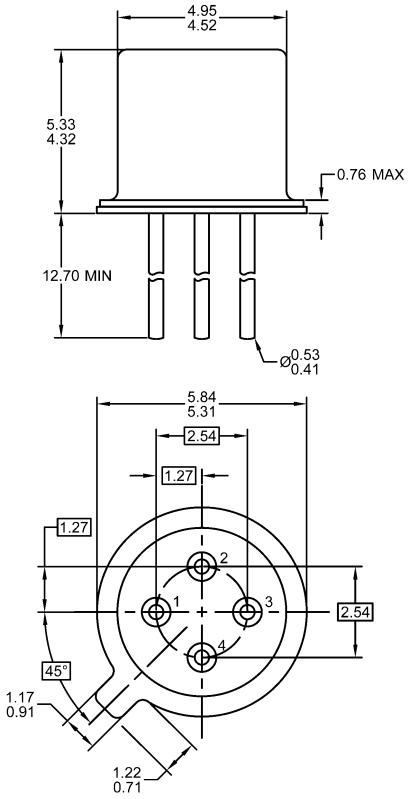
Parameters		Value	Unit
V_{RGS}	Reverse Gate Source and Gate Drain Voltage		V
I_{FG}	Continuous Forward Gate Current	50	mA
P_D	Continuous Device Power Dissipation		mW
P	Power Derating		mW/°C
T_J	Operating Junction Temperature	-55 to 125	°C
T_{STG}	Storage Temperature	-55 to 125	°C

Static Characteristics (@ TA = 25°C, Unless otherwise specified)

Parameters		Conditions	DPAD1			DPAD2			Unit
			Min	Typ	Max	Min	Typ	Max	
BV_R	Breakdown Reverse Voltage	I_R = -1µA	-45			-45			V
I_R	Reverse Current	V_R = -20V			-1			-2	pA
V_F	Forward Voltage Drop	I_F = 5mA		0.8	1.5		0.8	1.5	V
C_R	Capacitance	V_R = -5V, f = 1MHz			0.8			0.8	pF
$\lvert C_{R1} - C_{R2} \rvert$	Differential Capacitance	$V_{R1} = V_{R2}$ = -5V, f = 1MHz			0.2			0.2	pF

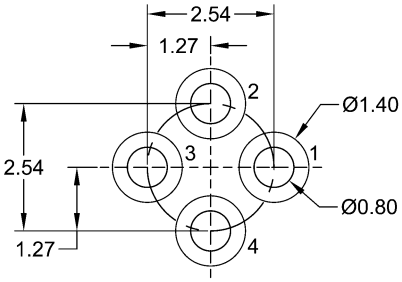
TO-72 Mechanical and Layout Data

Package Outline Data



1. All linear dimensions are in millimeters.
2. Four leaded device. Not all leads are shown in drawing views.
3. Package weight approximately 0.31 grams
4. Bulk product is shipped in standard ESD shipping material
5. Refer to JEDEC standards for additional information.

Suggested Through-Hole Layout



1. All linear dimensions are in millimeters.
2. The suggested land pattern dimensions have been provided as a straight lead reference only. A more robust pattern may be desired for wave soldering and/or bent lead configurations.