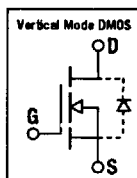


IF7000

N-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

- **FAST ANALOG SWITCH**
- **HIGH BREAKDOWN VOLTAGE**
- **LOW ON RESISTANCE SWITCHING**

Absolute maximum ratings at $T_A = 25^\circ\text{C}$

Drain Source Voltage	60 V
Continuous Forward Gate Current	10 mA
Gate Source Voltage	± 40 V
Continuous Drain Current	115 mA
Maximum Device Power Dissipation	200 mW
Thermal Resistance $R_{\theta JA}$	625 $^\circ\text{C/W}$

At 25°C free air temperature:

Static Electrical Characteristics

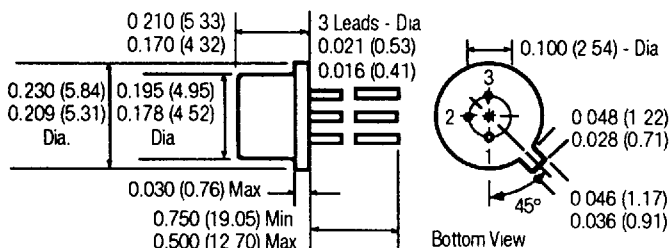
		IF7000		Process NM17	
		Min	Max	Unit	Test Conditions
Drain Source Breakdown Voltage	$V_{(BR)DSS}$	60		V	$I_D = -10 \mu\text{A}$, $V_{GS} = 0$ V
Gate Current	I_{GSS}		10	nA	$V_{GS} = \pm 15$ V, $V_{DS} = 0$ V
Gate Source Threshold Voltage	$V_{GS(TH)}$	0.8	3	V	$I_D = 1$ mA, $V_{DS} = V_{GS}$
Drain Saturation Current	I_{DSS}		1	μA	$V_{DS} = 48$ V, $V_{GS} = 0$ V
			1	mA	$V_{DS} = 48$ V, $V_{GS} = 0$ V $T_A = 125^\circ\text{C}$
Drain ON Current (Pulsed)	$I_{D(ON)}$	75		mA	$V_{DS} = 10$ V, $V_{GS} = 4.5$ V
Drain Source ON Voltage (Pulsed)	$V_{DS(ON)}$		2.5	V	$V_{GS} = 10$ V, $I_D = 500$ mA
			0.4	V	$V_{GS} = 4.5$ V, $I_D = 75$ mA $T_A = 125^\circ\text{C}$
Static Drain Source ON Resistance (Pulsed)	$r_{DS(ON)}$		5	Ω	$I_D = 500$ mA, $V_{GS} = 10$ V

Dynamic Electrical Characteristics

Common Source Forward Transconductance	g_{fs}	100		mS	$V_{DS} = 10$ V, $I_D = 200$ mA $f = 1$ kHz
Common Source Input Capacitance	C_{iss}		60	pF	$V_{DS} = 25$ V, $V_{GS} = 0$ V $f = 1$ MHz
Common Source Output Capacitance	C_{oss}		25	pF	$V_{DS} = 25$ V, $V_{GS} = 0$ V $f = 1$ MHz
Common Source Reverse Transfer Capacitance	C_{rss}		5	pF	$V_{DS} = 25$ V, $V_{GS} = 0$ V $f = 1$ MHz

Switching Characteristics

Turn ON Time	$t_{(on)}$		10	ns	$V_{DD} \approx 15$ V, $I_D = 500$ mA, $V_G = 10$ V $R_G = 25 \Omega$, $R_L = 25 \Omega$
Turn OFF Time	$t_{(off)}$		10	ns	



TO-18 Package

Dimensions in Inches (mm)

Pin Configuration

1 Source, 2 Gate, 3 Drain & Case



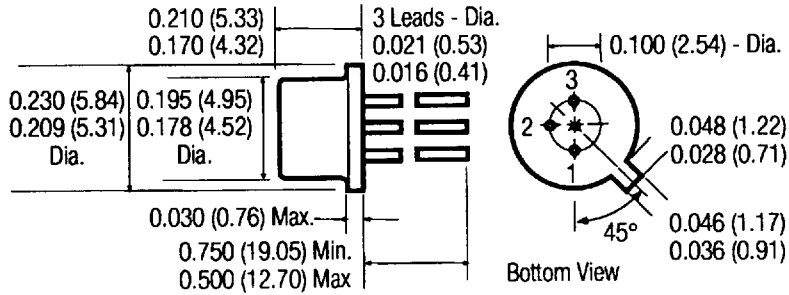
InterFET

(214) 487-1287

FAX (214) 276-3375

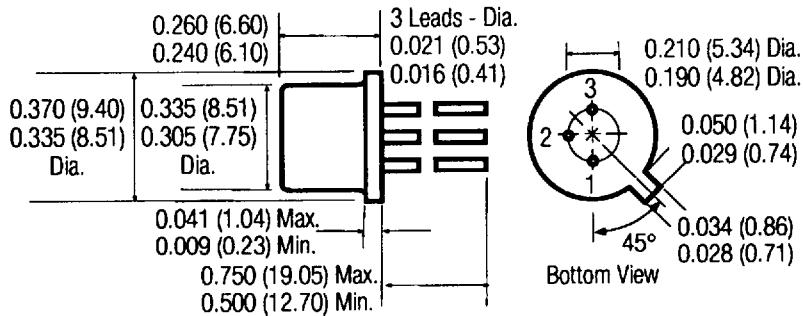
TO-18 Package

Dimensions in Inches (mm)



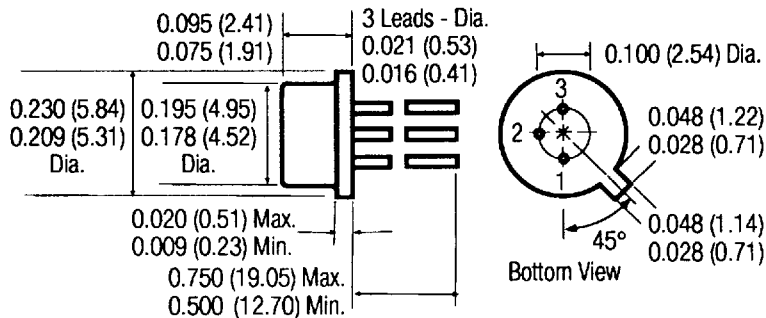
TO-39 Package

Dimensions in Inches (mm)

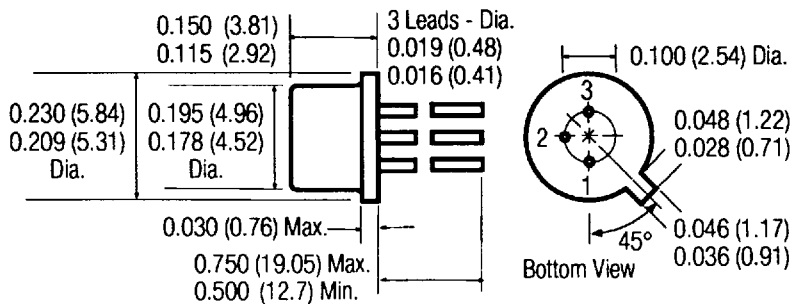


TO-46 Package

Dimensions in Inches (mm)

**TO-52 Package**

Dimensions in Inches (mm)

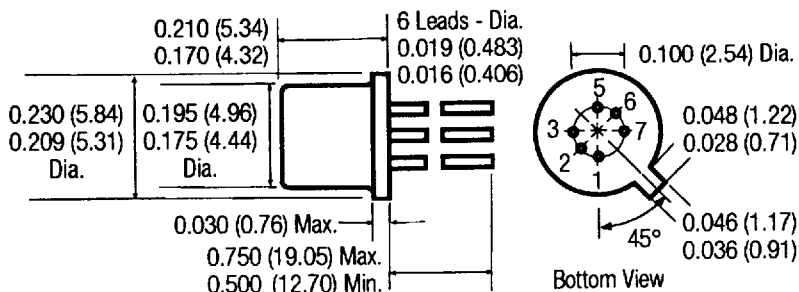
**InterFET**

(214) 487-1287

FAX (214) 276-3375

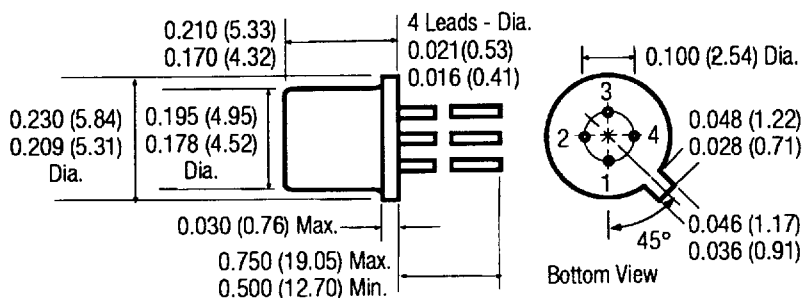
TO-71 Package

Dimensions in Inches (mm)



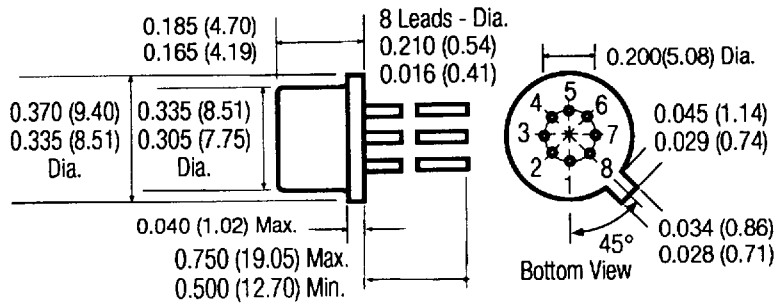
TO-72 Package

Dimensions in Inches (mm)

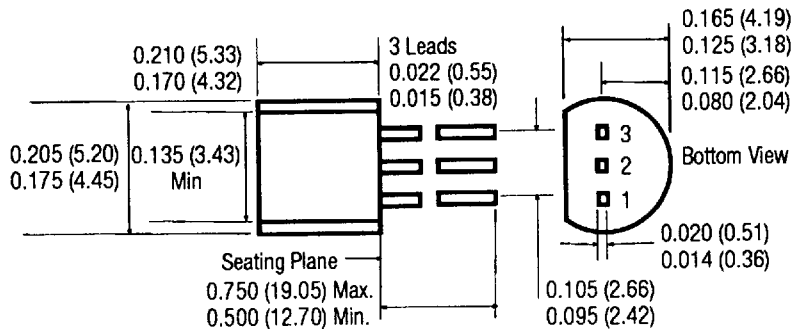


TO-78 Package

Dimensions in Inches (mm)

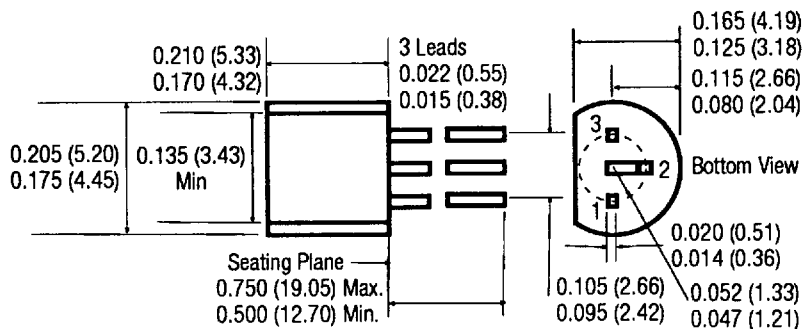
**TO-226AA Package**

Dimensions in Inches (mm)



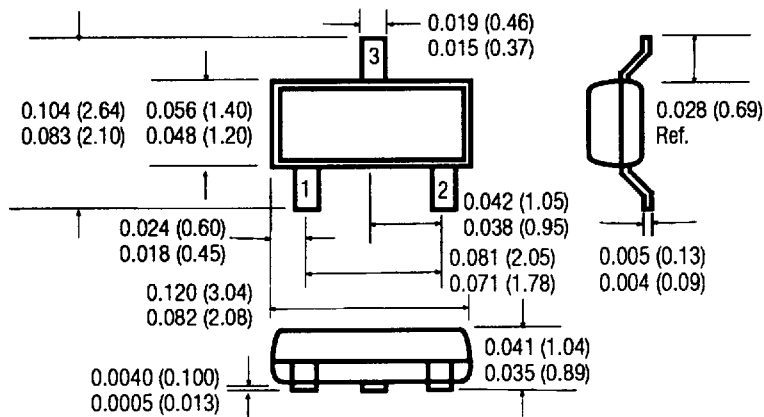
TO-226AB Package

Dimensions in Inches (mm)



TO-236 Package

Dimensions in Inches (mm)



SOIC-8 Package

Dimensions in Inches (mm)

