

**HIGH VOLTAGE  
SILICON EPITAXIAL JUNCTION  
N-CHANNEL FIELD EFFECT TRANSISTORS**

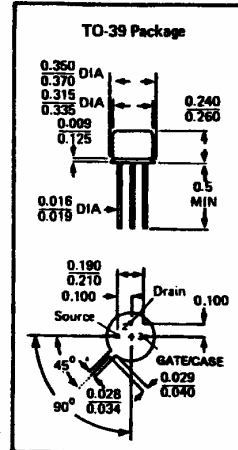
2N6449  
2N6450

GEOMETRY 559

- HIGH  $V_{GSS}$  . . . 300V MIN (2N6449)
- HIGH POWER RATING . . . 5W

**ELECTRICAL DATA ABSOLUTE MAXIMUM RATINGS**

PARAMETER	SYMBOL	2N6449	2N6450	UNITS
Drain to Gate Voltage	$BV_{DGO}$	300	200	Volts
Gate to Source Voltage	$BV_{GSO}$	-300	-200	Volts
Power Dissipation (25°C case)	$P_{DC}$	5		W
Derating Factor (Junction to Case)	$D_{FC}$	3.33		mW/°C
Power Dissipation (free air)	$P_{OA}$	800		mW
Derating Factor (free air)	$D_{FA}$	5.33		mW/°C
Junction Temp. (Oper. & Store)	$T_J$	-65 to 200		°C
Lead Temp. (1/16" From Case 10 sec)	$T_L$	300		°C
Continuous Forward Gate Current	$I_{GF}$	10		mA



**ELECTRICAL CHARACTERISTICS:  $T_A = 25^\circ\text{C}$  (UNLESS OTHERWISE STATED)**

PARAMETERS AND CONDITIONS	SYMBOL	2N6449			2N6450			UNITS
		Min.	Typ.	Max.	Min.	Typ.	Max.	
Gate Leakage Current $V_{GS} = -150V, V_{DS} = 0$	$I_{GSS}$		-1	-10				nA
Gate Leakage Current $V_{GS} = -150V, V_{DS} = 0, T_A = 150^\circ\text{C}$	$I_{GSS}$		-1	-10				$\mu\text{A}$
Gate Leakage Current $V_{GS} = -100V, V_{DS} = 0$	$I_{GSS}$		-1		-1	-10		nA
Gate Leakage Current $V_{GS} = -100V, V_{DS} = 0, T_A = 150^\circ\text{C}$	$I_{GSS}$		-1		-1	-10		$\mu\text{A}$
Gate Breakdown Voltage $I_G = -10\mu\text{A}, V_{DS} = 0$	$BV_{GSS}$	-300			-200			V
Pinch-Off Voltage $V_{DS} = 30V, I_D = 4n\text{A}$	$V_{PO}$	-2		-15			-15	V
Zero Bias Drain Current $V_{DS} = 30V, V_{GS} = 0$	$I_{DSS}^1$	2		10	2		10	mA
Forward Transfer Admittance $V_{DS} = 30V, V_{GS} = 0, f = 1\text{ kHz}$	$Y_{fs}^2$	500		3000	500		3000	$\mu\text{mho}$
Output Admittance $V_{DS} = 30V, V_{GS} = 0, f = 1\text{ kHz}$	$Y_{os}^2$			100			100	$\mu\text{mho}$
Input Capacitance $V_{DS} = 30V, V_{GS} = 0, f = 1\text{ kHz}$	$C_{iss}^2$			10			10	pf
Reverse Xfer Cap. $V_{DS} = 30V, V_{GS} = 0, f = 1\text{ kHz}$	$C_{rss}^2$			5			5	pf

- NOTES: 1. Measured using pulse techniques,  $t_w = 300\mu\text{s}$ , duty cycle < 2%.  
2. Measured with bias conditions applied for less than 5 seconds.

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