

2N3456
N-CHANNEL SILICON JUNCTION
FIELD-EFFECT TRANSISTORS

***ABSOLUTE MAXIMUM RATINGS (25°C)**

Gate-Drain or Gate-Source Voltage.....	-50 V
Gate Current.....	10 mA
Total Device Dissipation at (or below) 25°C Free-Air Temperature (Note 1)	300 mW
Storage Temperature Range	-65 to +200°C
Maximum Operating Temperature	200°C

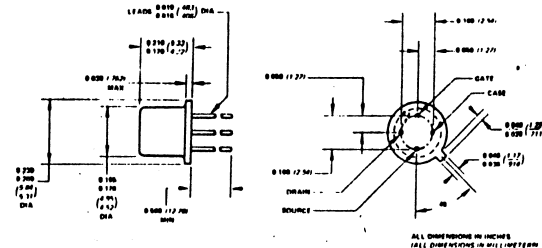
***ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)**

Characteristic	Test Conditions	2N3456		Unit
		Min	Max	
I_{GSS} Gate Reverse Current	$V_{GS} = -30\text{ V}, V_{DS} = 0$	25°C	-0.04	nA
		150°C	-0.15	µA
BV_{DGO} Drain-Gate Breakdown Voltage	$I_D = 1\ \mu\text{A}, I_S = 0$	-50		V
V_P Gate-Source Pinch-Off Voltage	$V_{DS} = 20\text{ V}, I_D = 1\ \mu\text{A}$		-4.8	V
$I_{D(OFF)}$ Drain Cutoff Current	$V_{DS} = 20\text{ V}, V_{GS} = ()$		0.5 (-5.0)	nA (V)
I_{DSS} Drain Current at Zero Gate Voltage	$V_{DS} = 30\text{ V (Note 2)}, V_{GS} = 0$	0.2	1.0	mA
K_{fs} Small-Signal Common-Source Forward Transconductance	$V_{DS} = 30\text{ V (Note 2)}, V_{GS} = 0, f = 1\text{ kHz}$	300	900	µmho
f_{oss} Small-Signal Common-Source Output Conductance	$V_{DS} = 30\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$		5	µmho
C_{oss} Common-Source Output Capacitance (Input Shorted)	$V_{DS} = 30\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$		1.5	pF
C_{iss} Common-Source Input Capacitance (Output Shorted)	$V_{GS} = 0, f = 1\text{ MHz}, V_{DS} = ()$		5 (8)	pF (V)
NF Noise Figure	$V_{DS} = 10\text{ V}, V_{GS} = 0, f = ()$ $R_{gen} = 1\text{ meg}, BW = 6\text{ Hz}$		4 (20)	dB (Hz)

NOTES:

1. Derate linearly to 150°C free-air temperature at rate of 1.7 mW/°C.
2. To minimize heating on high I_{DSS} units, this parameter is measured during a 2 ms interval 100 ms after power is applied. (Not a JEDEC condition.)

*JEDEC registered data.



JEDEC TO-72
 Fourth lead is in electrical contact with case.

