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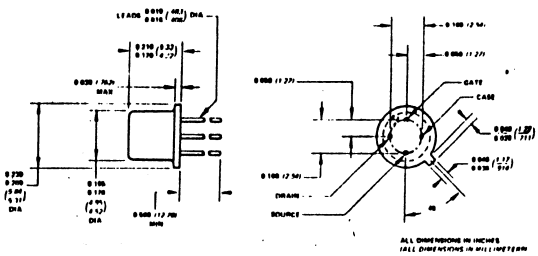
2N3456
N-CHANNEL SILICON JUNCTION FIELD-EFFECT TRANSISTORS

*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 Min	2N3456 Max	Unit
I_{GSS}	Gate Reverse Current	V_{GS} = -30 V, V_{DS} = 0	25°C		-0.04	nA
			150°C		-0.15	µA
BV_{DGO}	Drain-Gate Breakdown Voltage	I_D = 1 µA, I_S = 0		-50		V
V_P	Gate-Source Pinch-Off Voltage	V_{DS} = 20 V, I_D = 1 µA			-4.5	V
$I_{D(OFF)}$	Drain Cutoff Current	V_{DS} = 20 V, V_{GS} = ( )			0.5 (-5.0)	nA (V)
I_{DSS}	Drain Current at Zero Gate Voltage	V_{DS} = 30 V (Note 2), V_{GS} = 0		0.2	1.0	mA
g_{fs}	Small-Signal Common-Source Forward Transconductance	V_{DS} = 30 V (Note 2), V_{GS} = 0, f = 1 kHz		300	900	µmho
g_{oss}	Small-Signal Common-Source Output Conductance	V_{DS} = 30 V, V_{GS} = 0, f = 1 MHz			5	µmho
C_{oss}	Common-Source Output Capacitance (Input Shorted)	V_{DS} = 30 V, V_{GS} = 0, f = 1 MHz			1.5	pF
C_{iss}	Common-Source Input Capacitance (Output Shorted)	V_{GS} = 0, f = 1 MHz, V_{DS} = ( )			5 (8)	pF (V)
NF	Noise Figure	V_{DS} = 10 V, V_{GS} = 0, f = ( ), R_{gen} = 1 meg, BW = 6 Hz			4 (20)	dB (Hz)



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

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.

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