ELECTRONICS, INC.
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2N5486
Silicon N–Channel JFET Transistor
VHF/UHF Amplifier
TO92 Type Package

Absolute Maximum Ratings:

Drain–Gate Voltage, V_{DG} 25V
Reverse Gate–Source Voltage, V_{GSR} 25V
Drain Current, I_D 30mA
Forward Gate Current, $I_{G(f)}$ 10mA
Total Device Dissipation (T_C = +25°C), P_D 350mW
Derate Above 25°C . . . . . 2.8mW/°C
Operating Junction Temperature Range, T_J . . . . . –65° to +150°C
Storage Temperature Range, T_{stg} . . . . . –65° to +150°C

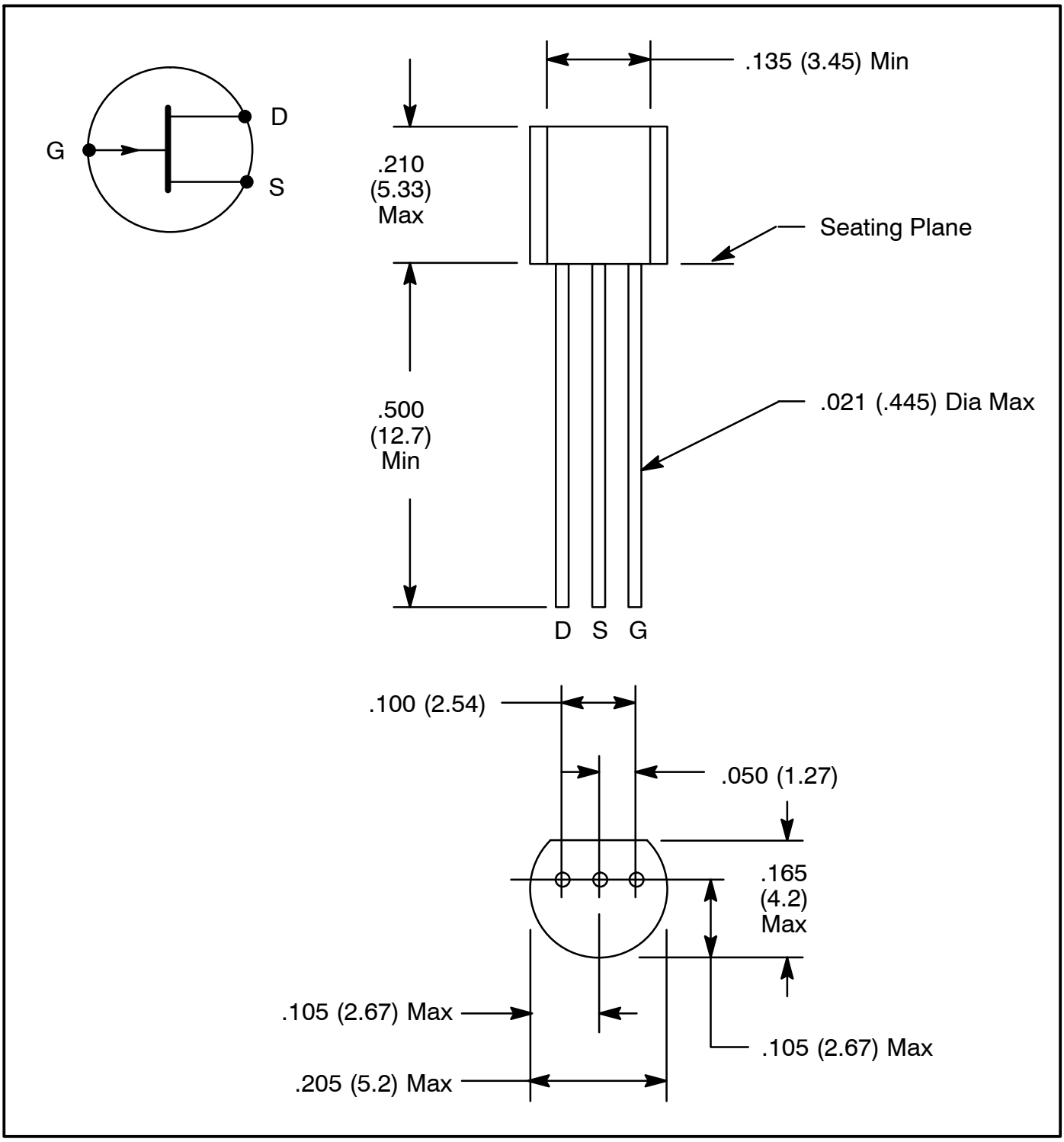
Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Gate–Source Breakdown Voltage	$V_{(BR)GSS}$	I_G = –1μA, V_{DS} = 0	–25	–	–	V
Gate Reverse Current	I_{GSS}	V_{GS} = –20V, V_{DS} = 0	–	–	–1.0	nA
		V_{GS} = –20V, V_{DS} = 0, T_A = +100°C	–	–	–0.2	nA
Gate–Source Cutoff Voltage	$V_{GS(off)}$	I_D = 10nA, V_{DS} = 15V	–2	–	–6	V
ON Characteristics						
Zero–Gate–Voltage Drain Current	I_{DSS}	V_{DS} = 15V, V_{GS} = 0	8	–	20	mA
Small Signal Characteristics Characteristics						
Forward Transfer Admittance	$\|y_{fs}\|$	V_{DS} = 15V, V_{GS} = 0, f = 1kHz	4000	–	8000	μmho
Input Admittance	$Re(y_{is})$	V_{DS} = 15V, V_{GS} = 0, f = 400MHz	–	–	1000	μmho
Output Admittance	$\|y_{os}\|$	V_{DS} = 15V, V_{GS} = 0, f = 1kHz	–	–	75	μmho
Output Conductance	$Re(y_{os})$	V_{DS} = 15V, V_{GS} = 0, f = 400MHz	–	–	100	μmho
Forward Transconductance	g_{fs}	V_{DS} = 15V, V_{GS} = 0, f = 400MHz	2500	–	–	μmho
Input Capacitance	C_{iss}	V_{DS} = 15V, V_{GS} = 0, f = 1MHz	–	–	5	pF
Reverse Transfer Capacitance	C_{rss}	V_{DS} = 15V, V_{GS} = 0, f = 1MHz	–	–	1	pF
Output Capacitance	C_{oss}	V_{DS} = 15V, V_{GS} = 0, f = 1MHz	–	–	2	pF

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Electrical Characteristics Cont'd): (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Functional Characteristics							
Noise Figure	NF	V_{DS} = 15V, I_D = 4mA, $R_G \approx$ 1kΩ	f = 100MHz	–	–	2	dB
			f = 400MHz	–	–	4	dB
Common Source Power Gain	G_{ps}	V_{DS} = 15V, I_D = 4mA	f = 100MHz	18	–	30	dB
			f = 400MHz	10	–	20	dB



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