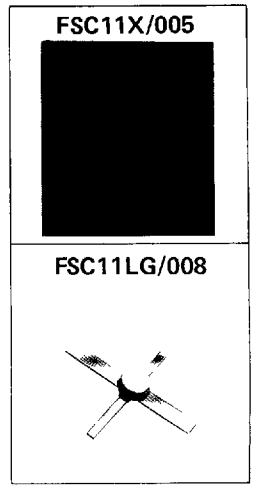
FSC11X/005
FSC11LG/008

DESCRIPTION

The FSC11X/005 Chip and FSC11LG/008 packaged devices are GaAs MESFETs suitable for use as the FET front end of an optical receiver in high speed lightwave communication systems. This N-channel 0.5 micron Schottky-Barrier gate FET combines high transconductance, low gate capacitance and low leakage current; all important factors in achieving low noise preamplification. Fujitsu's stringent Quality Assurance criteria and detailed Test Proceudres assure Highest Reliability Performance.



FEATURES

- High Transconductance
- Low Leakage Current
- Low Gate Capacitance
- Gold Bonding System
- Proven Reliability

ABSOLUTE MAXIMUM RATINGS (Ambient Temperature T_a = 25°C)

Item	Symbol	Condition	Rating	Unit
Drain-Source Voltage	V_{DS}		8	V
Gate-Source Voltage	V_{GS}		-5	V
Total Power Dissipation	P_T		250	mW
Storage Temperature	T_{stg}		-65 to 175	°C
Channel Temperature	T_{ch}		+175	°C
Thermal Resistance	R_{th}	Channel to Case	150	°C/W

ELECTRICAL CHARACTERISTICS (Ambient Temperature T_a = 25°C)

Item	Symbol	Test Condition		Limit			Unit
				Min.	Typ.	Max.	
Drain Current	I_{DSS}	V_{DS} = 3V, V_{GS} = 0V		30	60	90	mA
Transconductance	g_m	V_{DS} = 3V, I_{DS} = 10mA		37	40	—	mS
Pinch-off Voltage	V_p	V_{DS} = 3V, I_{DS} = 1mA		-0.5	-1.5	-3.5	V
Gate-Source Leakage Current	I_{GSO}	V_{GS} = -2V		—	15	30	nA
Gate-Source Capacitance	C_{GS}	V_{DS} = 3V, I_{DS} = 10mA	FSC11X/005	—	0.35	—	pF
			FSC11LG/008	—	0.55	—	pF
Gate-Drain Capacitance	C_{GD}	V_{DS} = 3V, I_{DS} = 10mA		—	0.06	—	pF

TYPICAL CHARACTERISTICS

Fig. 1 Drain Current vs. Drain-Source Voltage

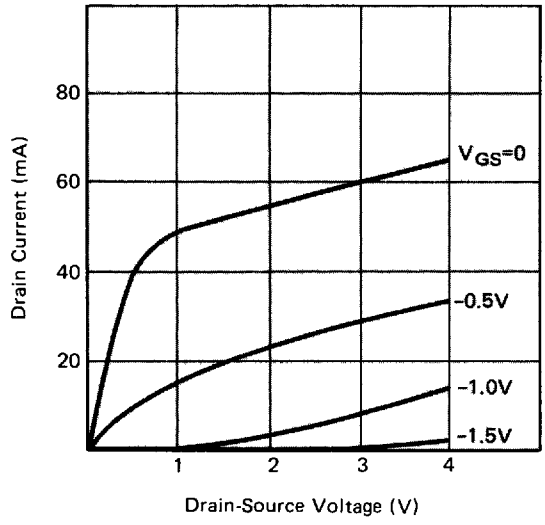


Fig. 2 Gate-Source Capacitance vs. Drain-Source Current

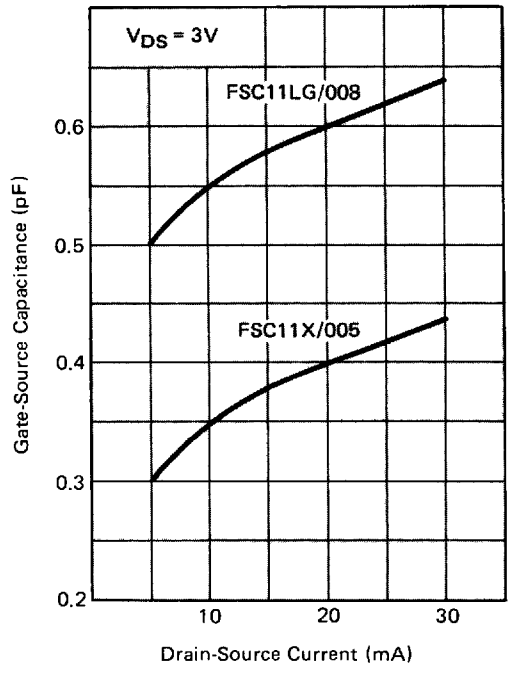


Fig. 3 Transconductance vs. Gate-Source Voltage

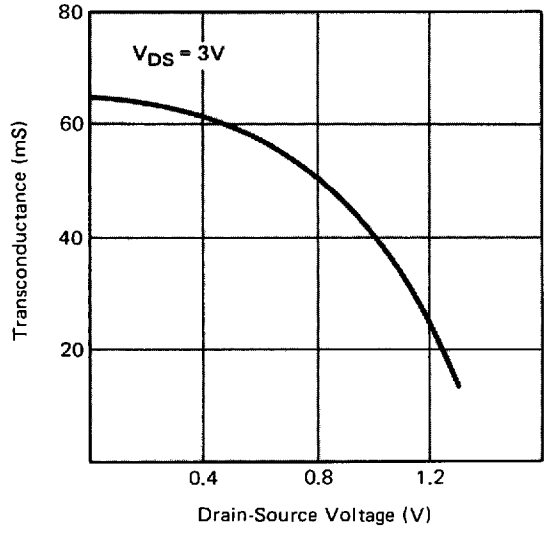


Fig. 4 Gate-Source Leakage Current vs. Gate-Source Voltage