3SK169

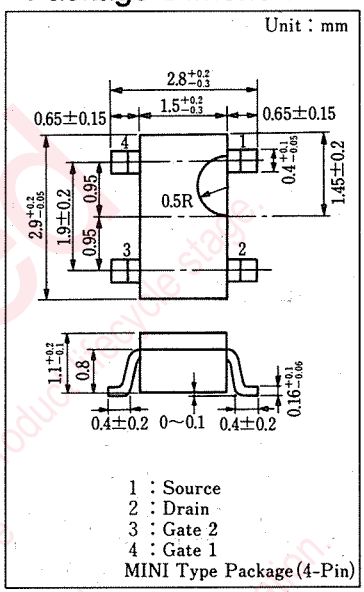
Silicon N Channel 4-pole MOS Type

For VHF high-gain low-noise amplification mixers

■ Features

- Large power gain PG
- A MINI type package that allows downsizing of equipment and automatic insertion by taping and magazine packaging

■ Package Dimensions



■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	15	V
Gate 1-Source Voltage	V_{G1S}	±8	V
Gate 2-Source Voltage	V_{G2S}	±8	V
Drain Current	I_D	30	mA
Power Dissipation	P_D	150	mW
Channel Temperature	T_{ch}	150	°C
Storage Temperature	T_{stg}	−55~+150	°C

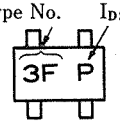
■ Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Drain Current	I_{DSS}*	V_{DS}=10V, V_{G1S}=0, V_{G2S}=4V	1.5		10	mA
Gate 1 Cutoff Current	I_{G1SS}	V_{DS}=0, V_{G2S}=0, V_{G1S}=±8V			±20	nA
Gate 2 Cutoff Current	I_{G2SS}	V_{DS}=0, V_{G1S}=0, V_{G2S}=±8V			±20	nA
Drain-Source Voltage	V_{DSK}	I_D=50μA, V_{G1S}=−5V, V_{G2S}=0	15			V
Gate 1-Source Cutoff Current	V_{G1S1}	V_{DS}=10V, V_{G2S}=4V, I_D=100μA	−3		+0.5	V
Gate 2-Source Cutoff Current	V_{G2S1}	V_{DS}=10V, V_{G1S}=0, I_P=100μA	−2		+0.5	V
Forward Transfer Admittance (Common Source)	$\|Y_{fs}\|$	V_{DS}=10V, I_D=10mA, V_{G2S}=4V, f=1kHz	23	30		mS
Input Capacitance	C_{iss}	V_{DS}=10V, V_{G1S}=−5V, V_{G2S}=−5V, f=1MHz		4.5	5.7	pF
Output Capacitance	C_{oss}			1.7	2.2	pF
Small-Signal Reverse Transfer Capacitance	C_{rss}			0.02		pF
Gain Reduction	CG	V_{DS}=8V, V_{G2S}=3V, I_D=1mA, f=200MHz, f_{LO}=245MHz, P_{LO}=10dBm	13	17		dB

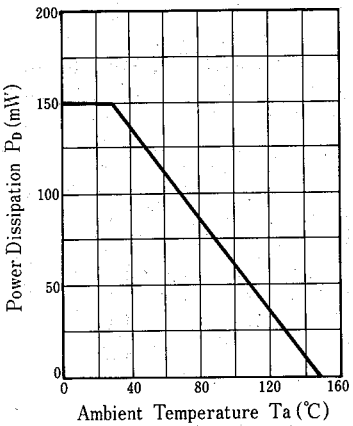
*I_{DSS} Ranking

Rank	P	Q
I_{DSS} (mA)	1.5~5	3~10
Marking	3FP	3FQ

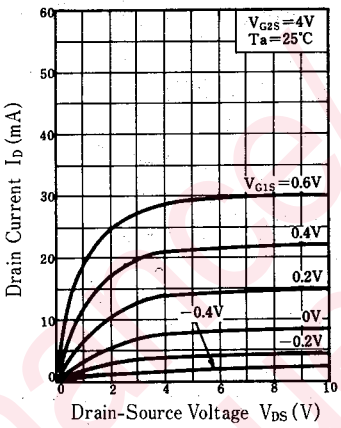
■ Type Name Marking (Example)



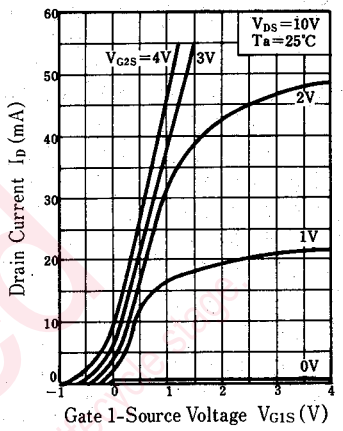
P_D—Ta



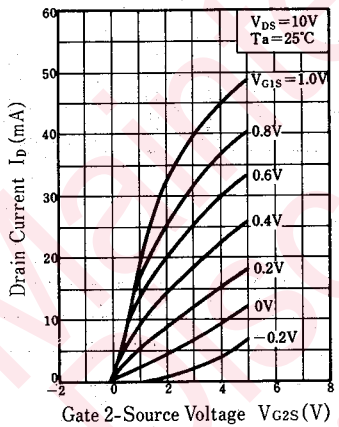
I_D—V_{DS}



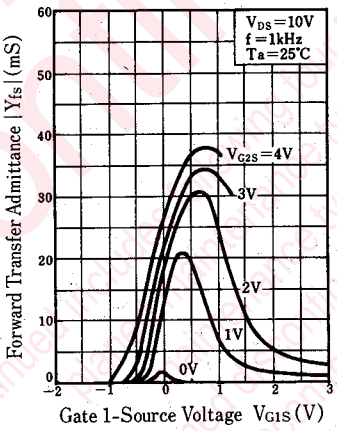
I_D—V_{G1S}



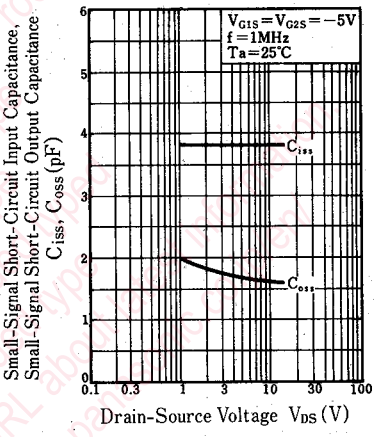
I_D—V_{G2S}



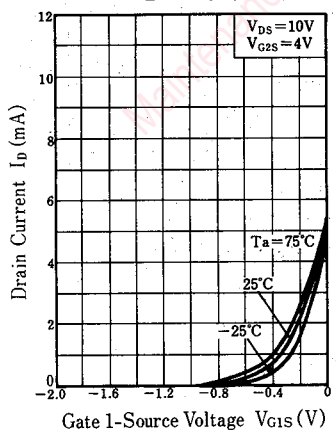
$|Y_{fs}|$—V_{G1S}



C_{iss},C_{oss}—V_{DS}



I_D—V_{G1S}



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