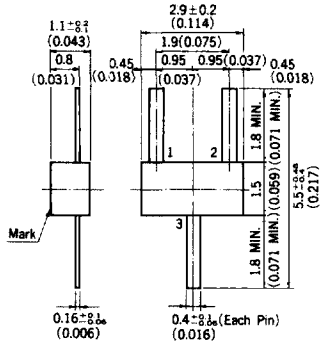
JUNCTION FIELD EFFECT TRANSISTOR

2SK67A

IMPEDANCE CONVERTOR
N-CHANNEL SILICON JUNCTION FIELD EFFECT TRANSISTOR
MINI MOLD

PACKAGE DIMENSIONS

in millimeters (inches)



1. Source
2. Drain
3. Gate

FEATURES

- Low zero gate voltage drain current: I_{DSS}=200 μA TYP.
- High forward transfer admittance:
  $|Y_{fs2}|$ = 1 500 μS TYP. (V_{DS} = 5.0 V, V_{GS}=0)

ABSOLUTE MAXIMUM RATINGS

Maximum Voltage and Currents (T_a=25 °C)

Drain to Source Voltage (V_{GS}=−1.0 V)	V_{DSX}	20	V
Gate to Drain Voltage	V_{GDO}	−20	V
Gate Current	I_G	10	mA
Drain Current (DC)	I_D	10	mA
Maximum Power Dissipation			
Total Power Dissipation at 25 °C Ambient Temperature	P_T	80	mW
Maximum Temperatures			
Junction Temperature	T_j	100	°C
Storage Temperature Range	T_{stg}	−55 to +100	°C

ELECTRICAL CHARACTERISTICS (T_a=25 °C)

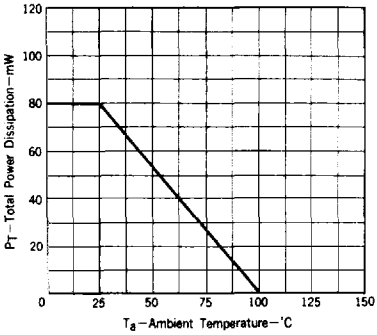
CHARACTERISTICS	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Zero-Gate Voltage Drain Current	I_{DSS}	20		540	μA	V_{DS}=5.0 V, V_{GS}=0
Gate to Source Cutoff Voltage	$V_{GS(off)}$			−0.8	V	V_{DS}=5.0 V, I_D=1.0 μA
Forward Transfer Admittance	$\|Y_{fs1}\|$	350			μS	V_{DS}=5.0 V, I_D=30 μA, f=1.0 kHz
	$\|Y_{fs2}\|$		1500		μS	V_{DS}=5.0 V, V_{GS}=0, f=1.0 kHz
Input Capacitance	C_{iss}		5.5		pF	V_{DS}=5.0 V, V_{GS}=0, f=1.0 MHz
Output Capacitancce	C_{oss}		2.7		pF	

I_{DSS} Classification

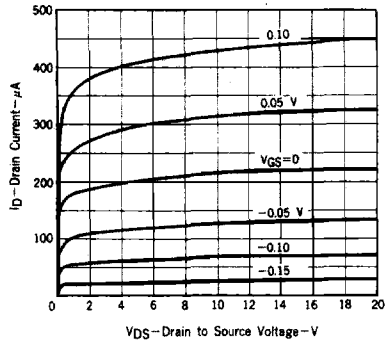
MARK	J2	J3	J4	J5	J6	J7
I_{DSS} (μA)	20 – 40	35 – 70	60 – 120	100 – 200	150 – 300	270 – 540

TYPICAL CHARACTERISTICS (T_a = 25 °C)

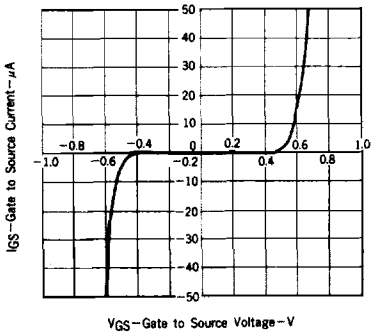
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



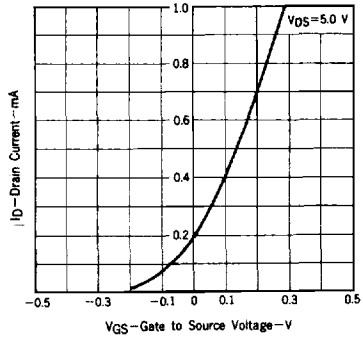
DRAIN CURRENT vs. DRAIN TO SOURCE VOLTAGE



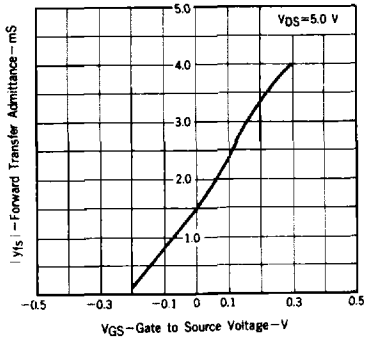
GATE TO SOURCE CURRENT vs. GATE TO SOURCE VOLTAGE



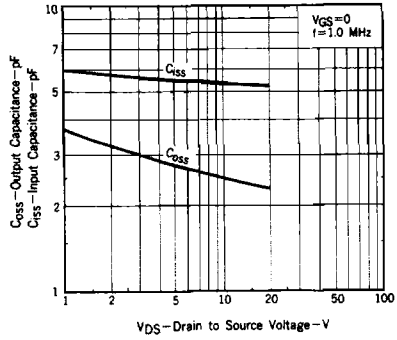
DRAIN CURRENT vs. GATE TO SOURCE VOLTAGE



FORWARD TRANSFER ADMITTANCE vs. GATE TO SOURCE VOLTAGE



INPUT AND OUTPUT CAPACITANCE vs. DRAIN TO SOURCE VOLTAGE



11

GATE TO SOURCE CUTOFF VOLTAGE
AND FORWARD TRANSFER ADMITTANCE vs.
ZERO-GATE VOLTAGE DRAIN CURRENT