

JUNCTION FIELD EFFECT TRANSISTORS

2SK160, 2SK160A

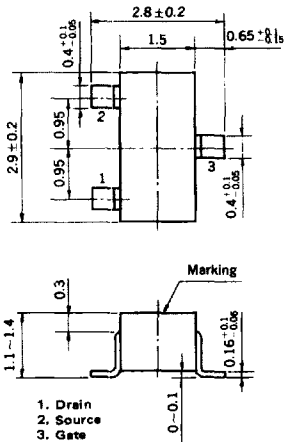
AF & RF AMPLIFIER

N-CHANNEL SILICON JUNCTION FIELD EFFECT TRANSISTOR

MINI MOLD

PACKAGE DIMENSIONS

in millimeters



DESCRIPTION

The 2SK160, 2SK160A are designed for hybrid IC which is designed for use in analog-switch, variable-resistor, RF amplifier and AF amplifier.

FEATURE

- Micro package.

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Maximum Voltages and Currents

	2SK160	2SK160A	
Gate to Drain Voltage	V_{GDO} -30	-50	V
Gate to Source Voltage	V_{GSO} -30	-50	V
Drain to Source Voltage ($V_{GS} = -5.0\text{ V}$)	V_{DSX}	30	V
Drain Current	I_D	20	mA
Gate Current	I_G	10	mA

Maximum Power Dissipation ($T_a = 25^\circ\text{C}$)

Total Power Dissipation	P_T	150	mW
-------------------------	-------	-----	----

Maximum Temperatures

Storage Temperature	T_{stg}	-55 to +125	$^\circ\text{C}$
Junction Temperature	T_j	125	$^\circ\text{C}$

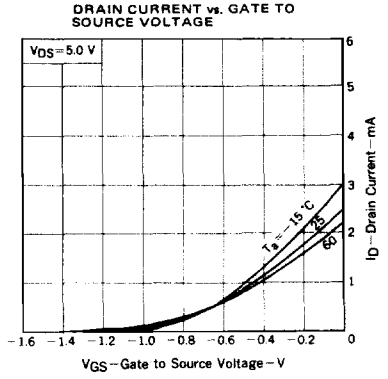
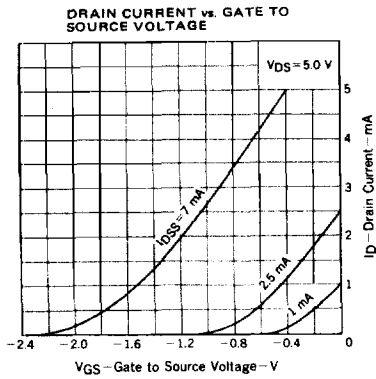
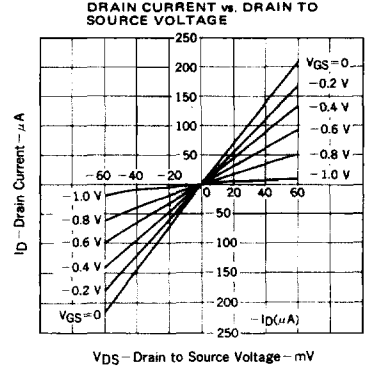
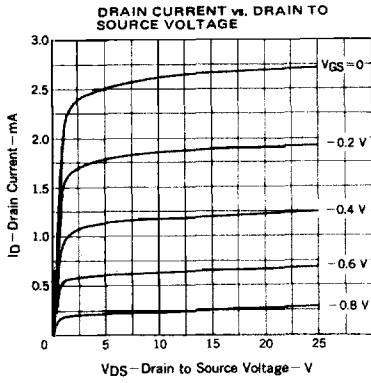
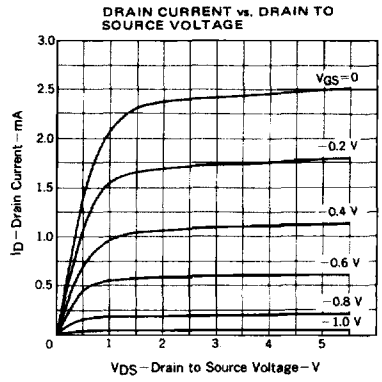
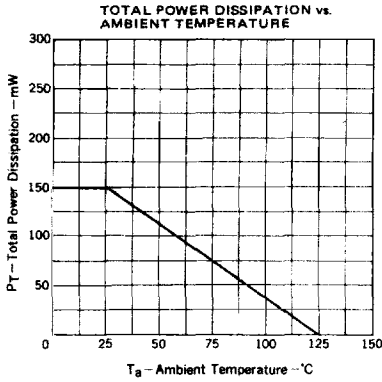
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Gate Cutoff Current	I_{GSS}			-10	nA	$V_{GS} = -30\text{ V}, V_{DS} = 0$
Zero-Gate Voltage Drain Current	I_{DSS}	0.5	2.5	12	mA	$V_{DS} = 5.0\text{ V}, V_{GS} = 0$
Gate to Source Cutoff Voltage	$V_{GS(off)}$	-0.25	-1.1	-4.5	V	$V_{DS} = 5.0\text{ V}, I_D = 10\ \mu\text{A}$
Forward Transfer Admittance	$ Y_{fs} _1$	1.5	2.1		mS	$V_{DS} = 5.0\text{ V}, I_D = 0.5\text{ mA}, f = 1.0\text{ kHz}$
Forward Transfer Admittance	$ Y_{fs} _2$	1.5	4.1		mS	$V_{DS} = 5.0\text{ V}, V_{GS} = 0, f = 1.0\text{ kHz}$
Input Capacitance	C_{iss}		4.1		pF	$V_{DS} = 10\text{ V}, V_{GS} = 0, f = 1.0\text{ MHz}$
Feedback Capacitance	C_{rss}		0.9		pF	$V_{DS} = 10\text{ V}, V_{GS} = 0, f = 1.0\text{ MHz}$

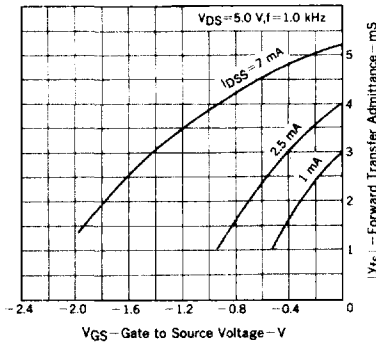
I_{DSS} Classification

Marking	2SK160	K4	K5	K6	K7
	2SK160A	K24	K25	K26	K27
$I_{DSS}(\text{mA})$	0.5 to 1.5	1.0 to 3.0	2.0 to 6.0	4.0 to 12	

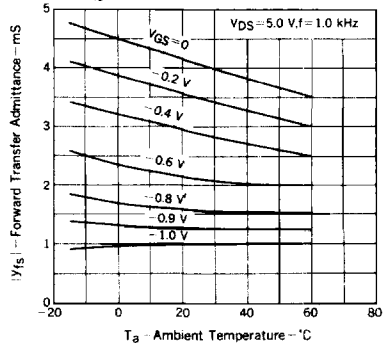
TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)



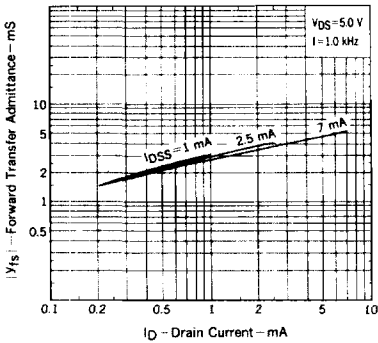
FORWARD TRANSFER ADMITTANCE (y_{fs}) vs. GATE TO SOURCE VOLTAGE



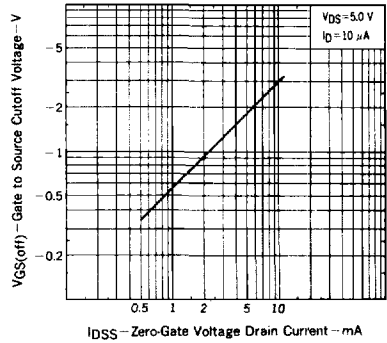
FORWARD TRANSFER ADMITTANCE (y_{fs}) vs. AMBIENT TEMPERATURE



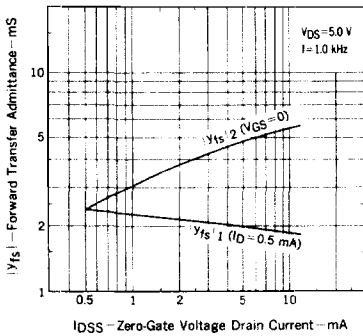
FORWARD TRANSFER ADMITTANCE (y_{fs}) vs. DRAIN CURRENT



GATE TO SOURCE CUTOFF VOLTAGE vs. ZERO-GATE VOLTAGE DRAIN CURRENT



FORWARD TRANSFER ADMITTANCE (y_{fs}) vs. ZERO-GATE VOLTAGE DRAIN CURRENT



INPUT AND REVERSE TRANSFER CAPACITANCE vs. DRAIN TO SOURCE VOLTAGE

