

# JUNCTION FIELD EFFECT TRANSISTOR

# 2SK660

## N-CHANNEL SILICON JUNCTION FIELD EFFECT TRANSISTOR FOR IMPEDANCE CONVERTER OF ECM

### DESCRIPTION

The 2SK660 is suitable for converter of ECM.

### FEATURES

- Compact package
- High forward transfer admittance  
|  $y_{fs}$  | = 1200  $\mu$ S TYP. ( $V_{DS} = 5$  V,  $I_D = 0$   $\mu$ A)
- Low capacitance  
 $C_{iss} = 4.5$  pF ( $V_{DS} = 5$  V,  $V_{GS} = 0$  V,  $f = 1$  MHz)
- Includes diode and high resistance at G - S

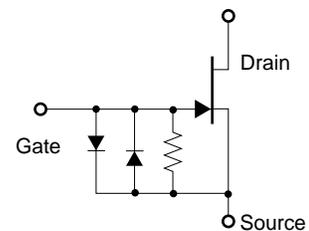
### ORDERING INFORMATION

PART NUMBER	PACKAGE
2SK660	SST

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

Drain to Source Voltage <sup>Note</sup>	$V_{DSX}$	20	V
Gate to Drain Voltage	$V_{GDO}$	-20	V
Drain Current	$I_D$	10	mA
Gate Current	$I_G$	10	mA
Total Power Dissipation	$P_T$	100	mW
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$

### EQUIVALENT CIRCUIT



**Note**  $V_{GS} = -1.0$  V

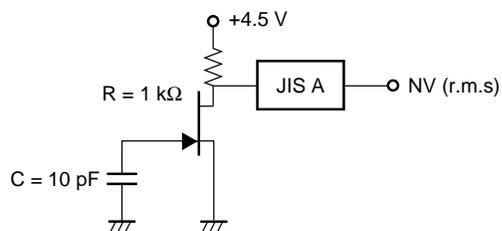
**Remark** Please take care of ESD (Electro Static Discharge) when you handle the device in this document.

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Not all devices/types available in every country. Please check with local NEC representative for availability and additional information.

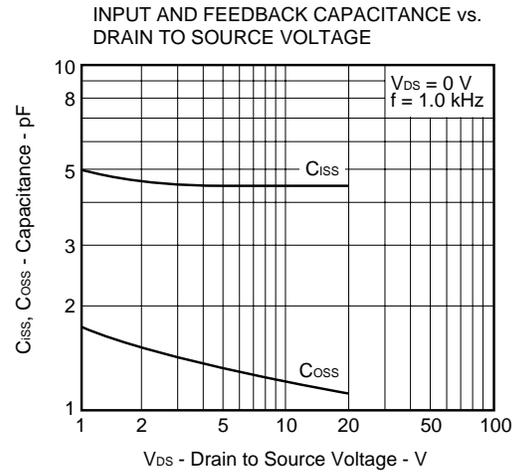
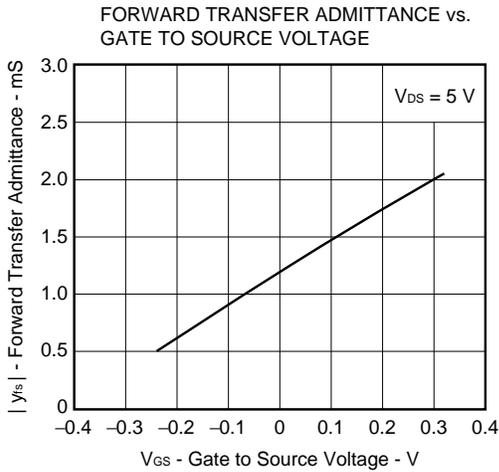
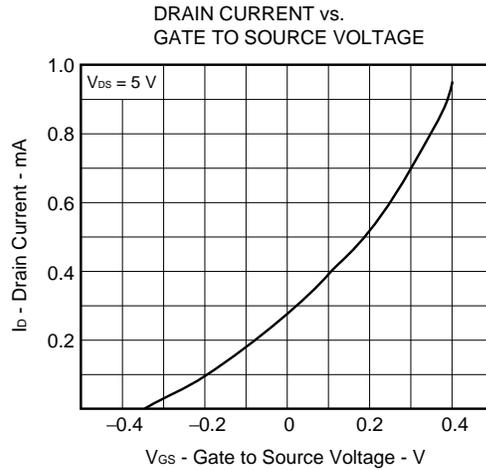
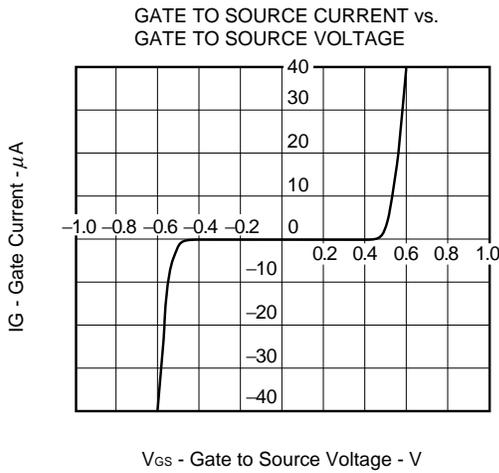
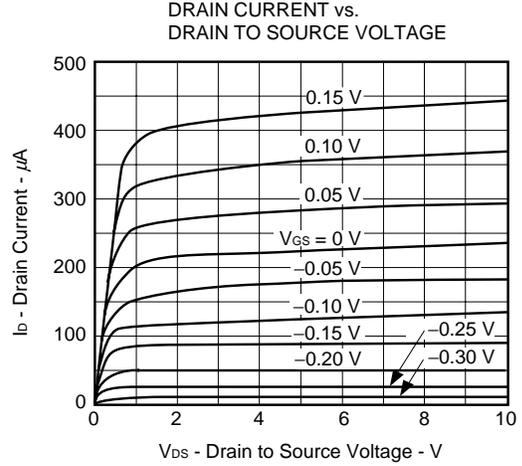
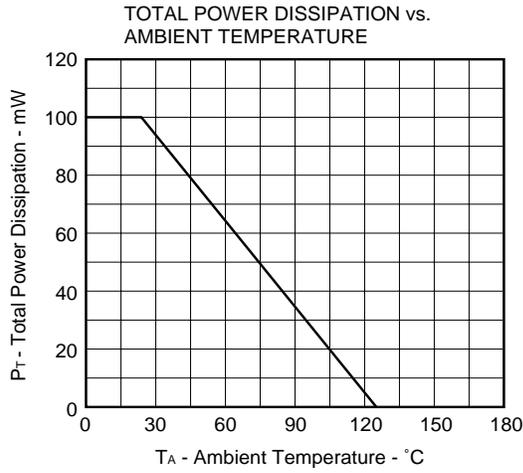
**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C)**

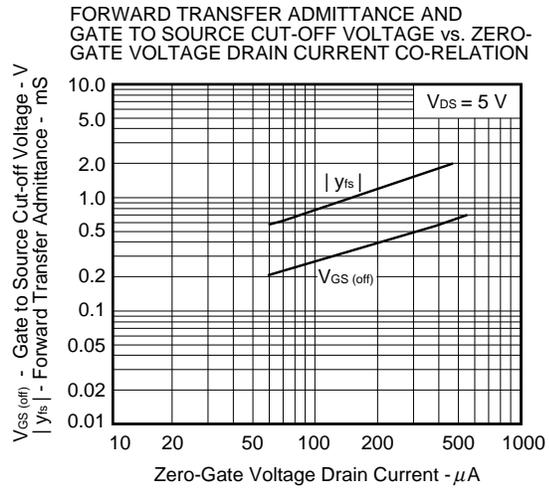
CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Zero Gate Voltage Drain Cut-off Current	I <sub>DSS</sub>	V <sub>DS</sub> = 5.0 V, V <sub>GS</sub> = 0 V	60		500	μA
Gate Cut-off Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> = 5.0 V, I <sub>D</sub> = 1.0 μA			-1.0	V
Forward Transfer Admittance	y <sub>fs1</sub>	V <sub>DS</sub> = 5.0 V, I <sub>D</sub> = 30 μA, f = 1.0 kHz	150			μS
Forward Transfer Admittance	y <sub>fs2</sub>	V <sub>DS</sub> = 5.0 V, V <sub>GS</sub> = 0 V, f = 1.0 kHz	150	1200		μS
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 5.0 V		4.5	6.0	pF
Output Capacitance	C <sub>oss</sub>	V <sub>GS</sub> = 0 V		1.5	3.0	pF
Reverse Transfer Capacitance	C <sub>rss</sub>	f = 1.0 MHz		1.2	3.0	pF
Noise Voltage	NV	See Test Circuit		1.0	3.0	μV

**NOISE VOLTAGE TEST CIRCUIT**

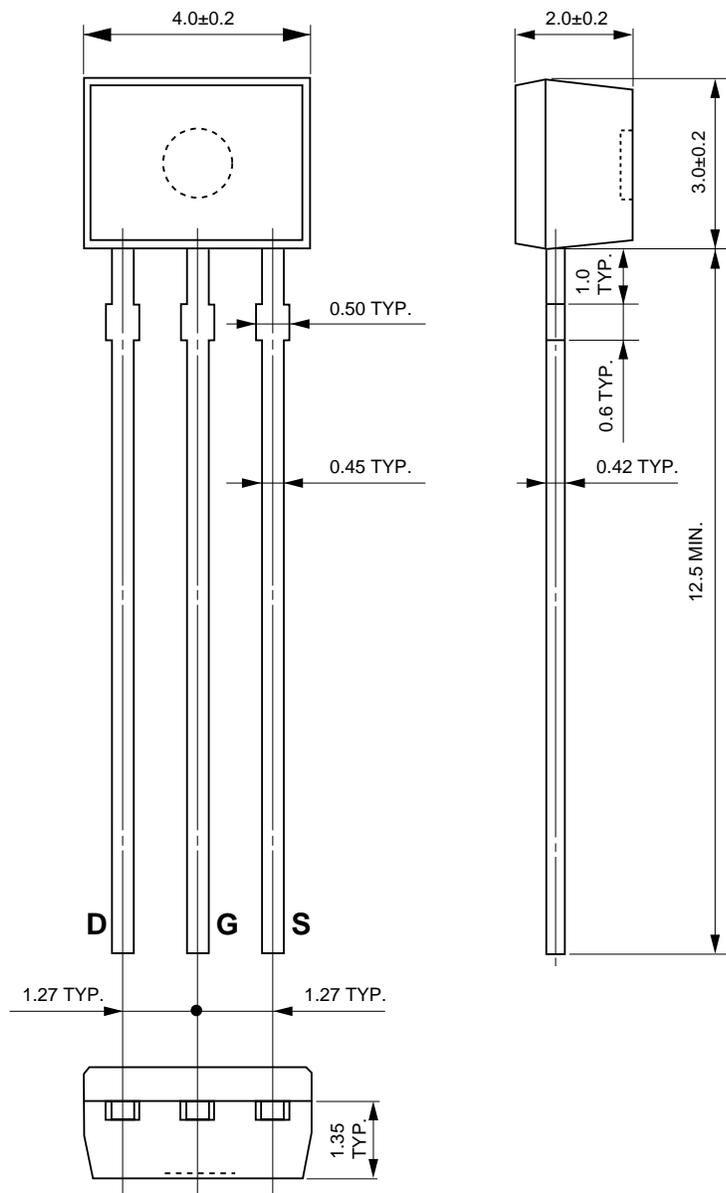


TYPICAL CHARACTERISTICS (T<sub>A</sub> = 25°C)





PACKAGE DRAWING (Unit: mm)



[MEMO]

[MEMO]

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