

JUNCTION FIELD EFFECT TRANSISTOR 2SK2552

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

DESCRIPTION

The 2SK2552 is suitable for converter of ECM.

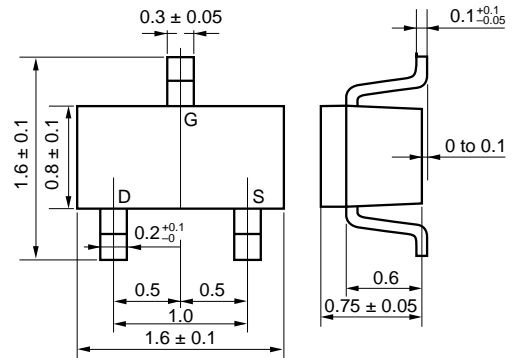
FEATURES

- Compact package
- High forward transfer admittance
1000 μS TYP. ($I_{\text{DSS}} = 100 \mu\text{A}$)
1600 μS TYP. ($I_{\text{DSS}} = 200 \mu\text{A}$)
- Includes diode and high resistance at G - S

ORDERING INFORMATION

PART NUMBER	PACKAGE
2SK2552	SC-75 (USM)

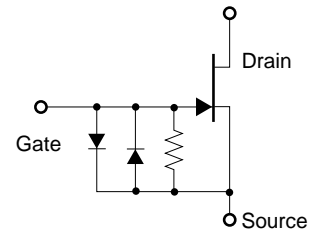
PACKAGE DRAWING (Unit: mm)



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

Drain to Source Voltage ^{Note1}	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 ^{Note2}	P_{T}	200	mW
Junction Temperature	T_{J}	125	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

EQUIVALENT CIRCUIT



Notes 1. $V_{\text{GS}} = -1.0 \text{ V}$

2. Mounted on ceramic substrate of $3.0 \text{ cm}^2 \times 0.64 \text{ mm}$

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

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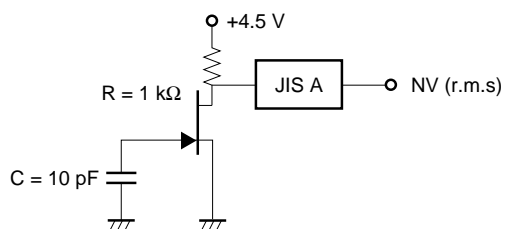
ELECTRICAL CHARACTERISTICS (T_A = 25°C)

CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Zero Gate Voltage Drain Cut-off Current	I _{DSS}	V _{DS} = 5.0 V, V _{GS} = 0 V	40		600	μA
Gate Cut-off Voltage	V _{GS(off)}	V _{DS} = 5.0 V, I _D = 1.0 μA	-0.1		-1.0	V
Forward Transfer Admittance	y _{fs1}	V _{DS} = 5.0 V, I _D = 30 μA, f = 1.0 kHz	350			μS
Forward Transfer Admittance	y _{fs2}	V _{DS} = 5.0 V, V _{GS} = 0 V, f = 1.0 kHz	350			μS
Input Capacitance	C _{iss}	V _{DS} = 5.0 V, V _{GS} = 0 V, f = 1.0 MHz		7.0	8.0	pF
Noise Voltage	NV	See Test Circuit		1.8	3.0	μV

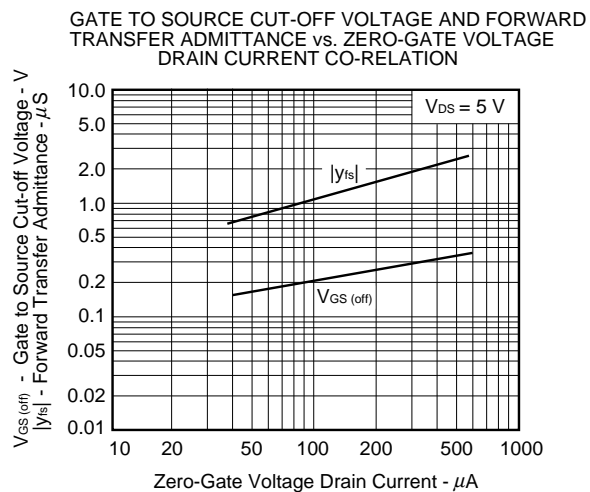
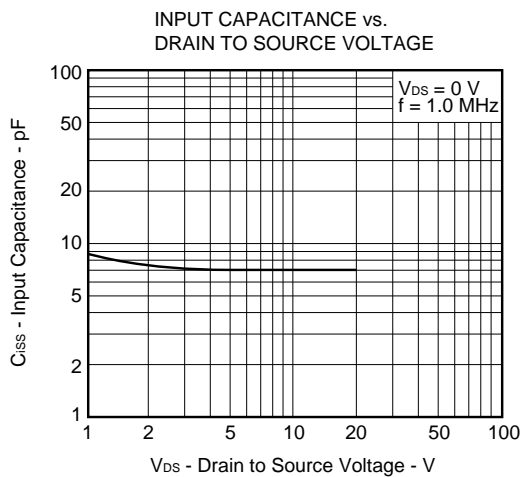
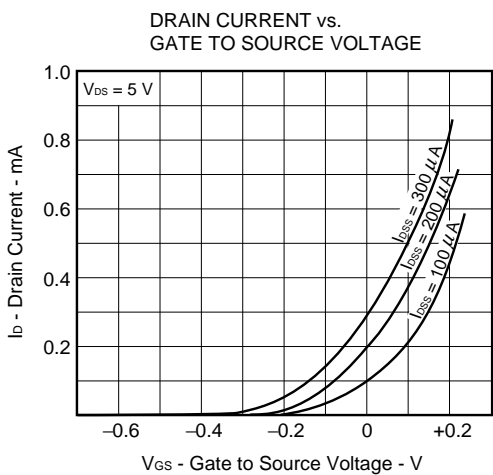
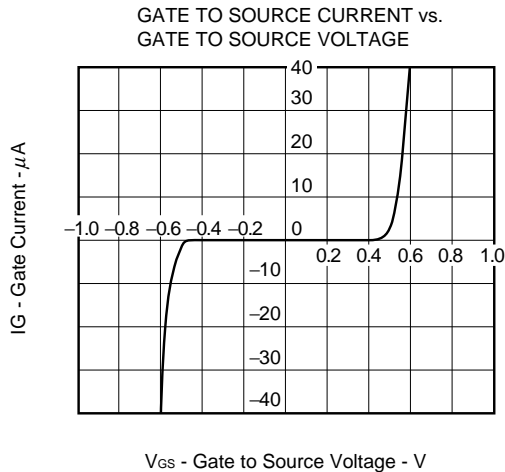
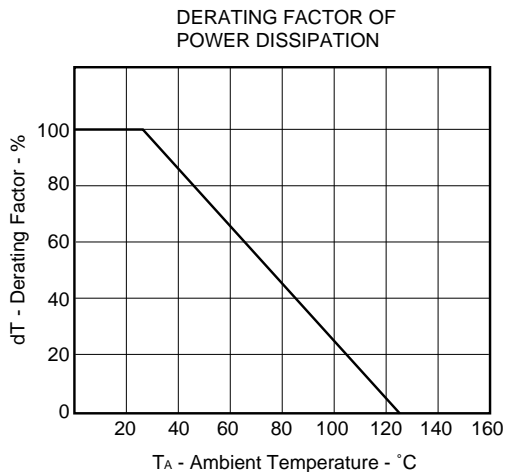
I_{DSS} RANK

MARKING	J2	J3	J4	J5	J6	J7
I _{DSS} (μA)	40 to 70	60 to 110	90 to 180	150 to 300	200 to 450	300 to 600

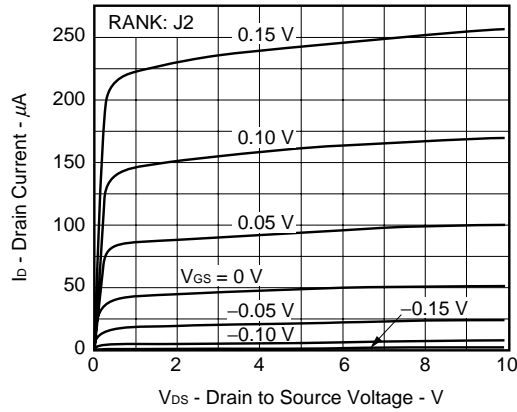
NOISE VOLTAGE TEST CIRCUIT



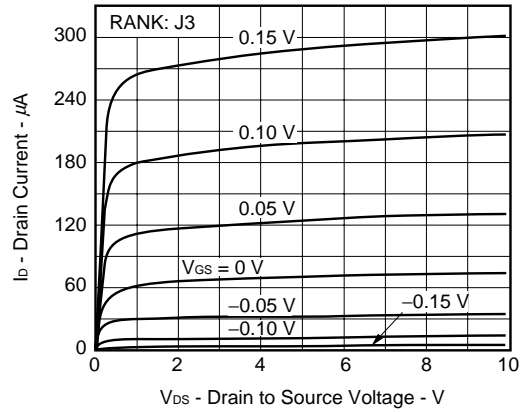
TYPICAL CHARACTERISTICS (T_A = 25°C)



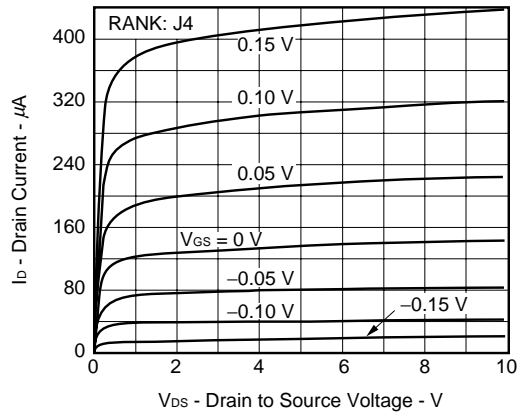
DRAIN CURRENT vs.
DRAIN TO SOURCE VOLTAGE



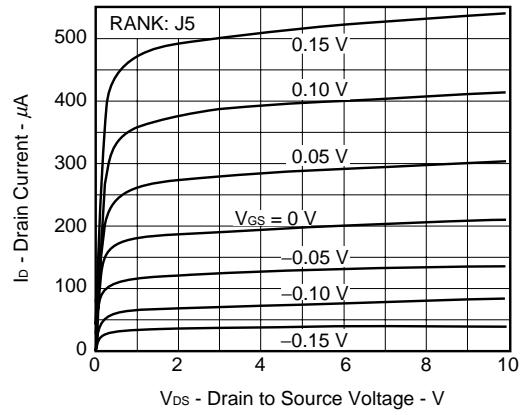
DRAIN CURRENT vs.
DRAIN TO SOURCE VOLTAGE



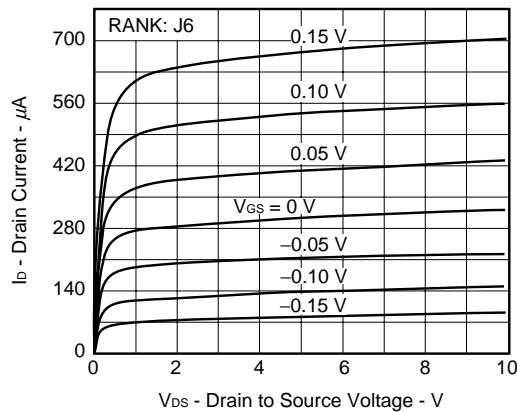
DRAIN CURRENT vs.
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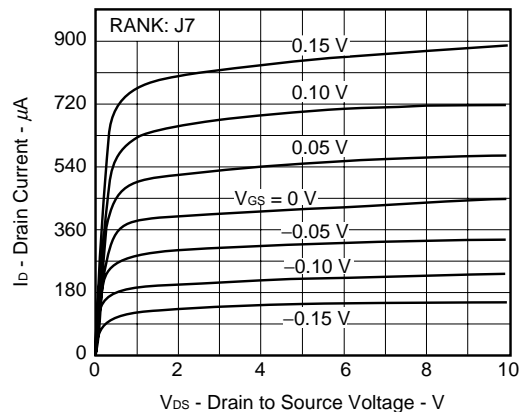
DRAIN CURRENT vs.
DRAIN TO SOURCE VOLTAGE



DRAIN CURRENT vs.
DRAIN TO SOURCE VOLTAGE



DRAIN CURRENT vs.
DRAIN TO SOURCE VOLTAGE



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