

JUNCTION FIELD EFFECT TRANSISTOR 2SK3718

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

DESCRIPTION

The 2SK3718 is suitable for converter of ECM.

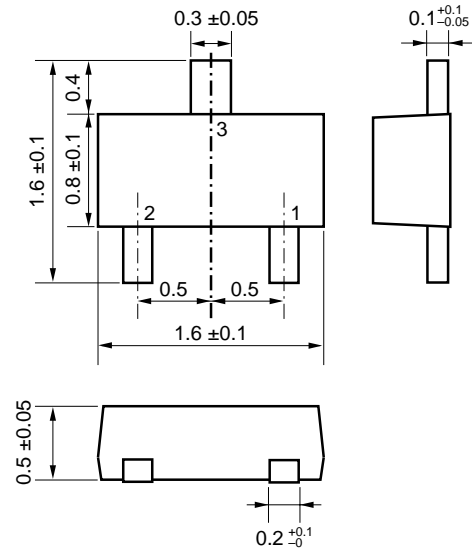
FEATURES

- Compact package
- Low Noise
NV = 1.3 μ V TYP.
- High Forward Transfer Admittance
1600 μ S TYP. ($I_{DSS} = 250 \mu$ A)
- Includes diode and high resistance at G-S

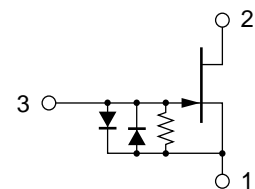
ORDERING INFORMATION

PART NUMBER	PACKAGE
2SK3718	SC-89 (TUSM)

PACKAGE DRAWING (Unit: mm)



EQUIVALENT CIRCUIT



1: Source
2: Drain
3: Gate

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

Drain to Source Voltage ($V_{GS} = -1.0 \text{ V}$)	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	$^\circ\text{C}$

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

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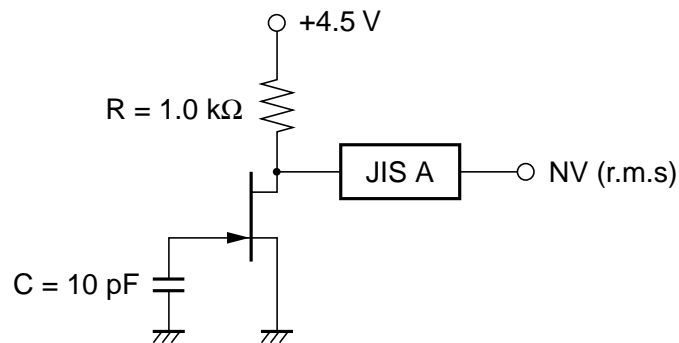
ELECTRICAL CHARACTERISTICS (T_A = 25°C)

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	90	250	430	μA
Gate Cut-off Voltage	V _{GS(off)}	V _{DS} = 5.0 V, I _D = 1.0 μA		-0.37	-1.0	V
Forward Transfer Admittance	y _{fs1}	V _{DS} = 5.0 V, I _D = 30 μA, f = 1.0 kHz	300	480		μS
	y _{fs2}	V _{DS} = 5.0 V, V _{GS} = 0 V, f = 1.0 kHz	750	1600		μS
Input Capacitance	C _{iss}	V _{DS} = 5.0 V, V _{GS} = 0 V, f = 1.0 MHz		3.9		pF
Noise Voltage	NV	Refer to NOISE VOLTAGE TEST CIRCUIT		1.3	2.0	μV

I_{DSS} CLASSIFICATION

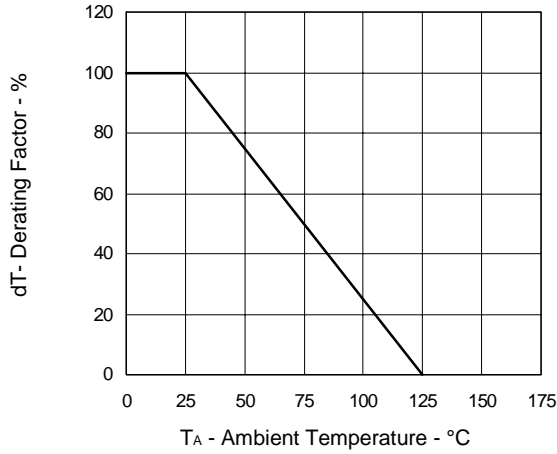
MARKING	AE	AF	AH	AJ
I _{DSS} (μA)	90 to 180	150 to 240	210 to 350	320 to 430

NOISE VOLTAGE TEST CIRCUIT

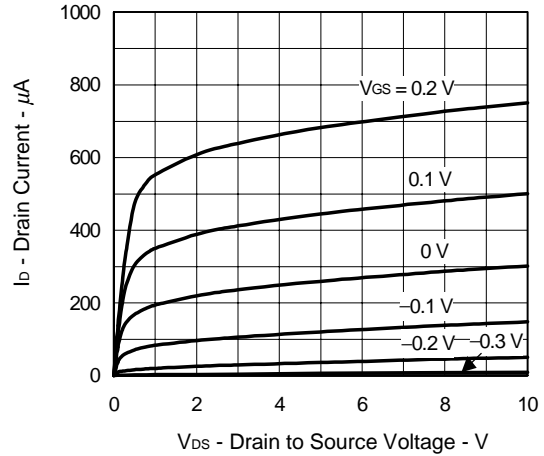


TYPICAL CHARACTERISTICS (T_A = 25°C)

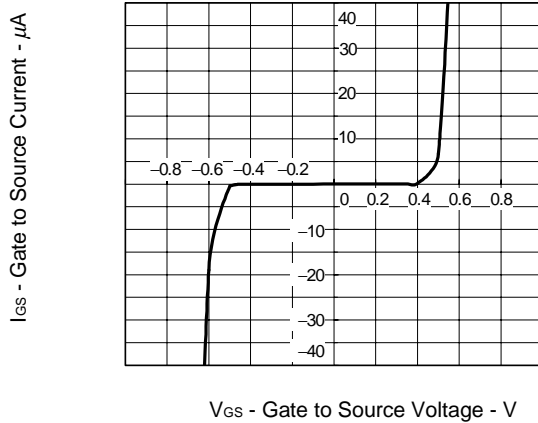
DERATING FACTOR OF POWER DISSIPATION



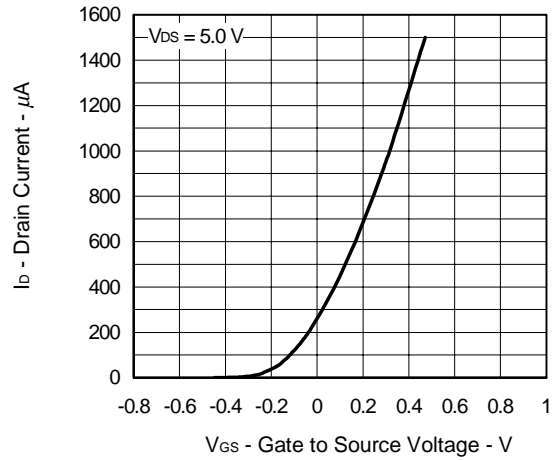
DRAIN CURRENT vs. DRAIN TO SOURCE VOLTAGE



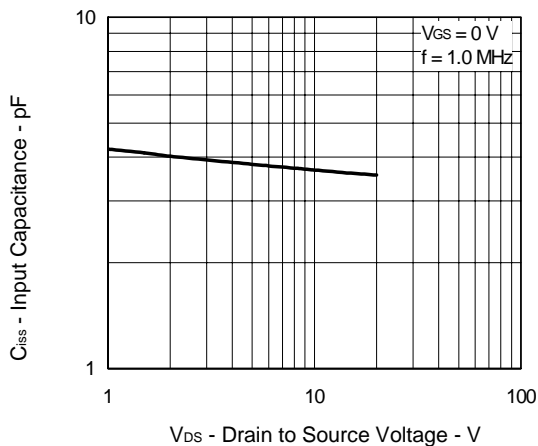
GATE TO SOURCE CURRENT vs. GATE TO SOURCE VOLTAGE



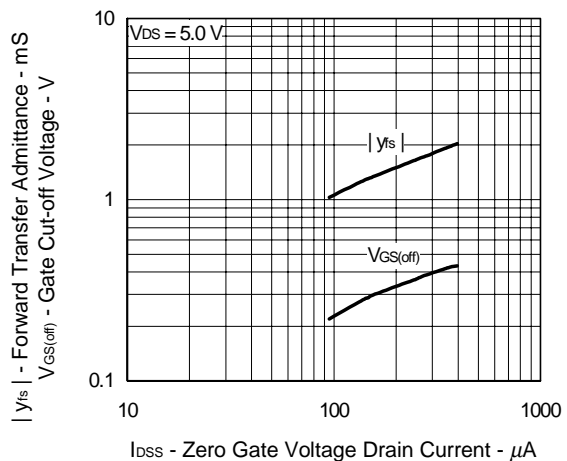
DRAIN CURRENT vs. GATE TO SOURCE VOLTAGE



INPUT CAPACITANCE vs. DRAIN TO SOURCE VOLTAGE



FORWARD TRANSFER ADMITTANCE AND GATE CUT-OFF VOLTAGE vs. ZERO GATE VOLTAGE DRAIN CURRENT



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