

# JUNCTION FIELD EFFECT TRANSISTOR 2SK3717

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

### DESCRIPTION

The 2SK3717 is suitable for converter of ECM.

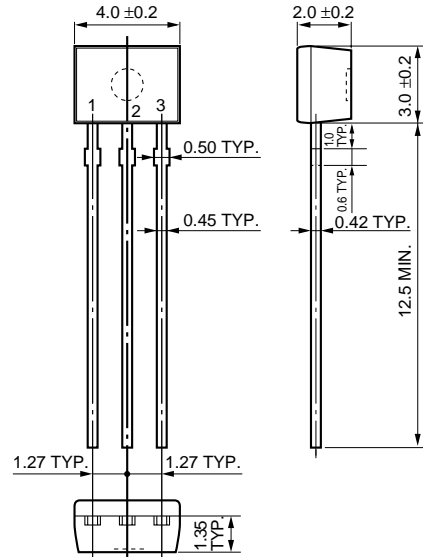
### FEATURES

- Compact package
- High forward transfer admittance  
 1400  $\mu\text{S}$  TYP. ( $I_{\text{DSS}} = 250 \mu\text{A}$ )
- Includes diode and high resistance at G-S

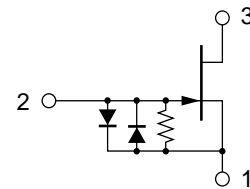
### ORDERING INFORMATION

PART NUMBER	PACKAGE
2SK3717	SC-72 (SST)

### PACKAGE DRAWING (Unit: mm)



### EQUIVALENT CIRCUIT



- 1: Source  
 2: Gate  
 3: Drain

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

Drain to Source Voltage ( $V_{\text{GS}} = -1.0 \text{ V}$ )	$V_{\text{DSX}}$	20	V
Gate to Drain Voltage	$V_{\text{GDO}}$	-20	V
Drain Current	$I_{\text{D}}$	10	mA
Gate Current	$I_{\text{G}}$	10	mA
Total Power Dissipation	$P_{\text{T}}$	100	mW
Junction Temperature	$T_{\text{J}}$	125	$^\circ\text{C}$
Storage Temperature	$T_{\text{stg}}$	-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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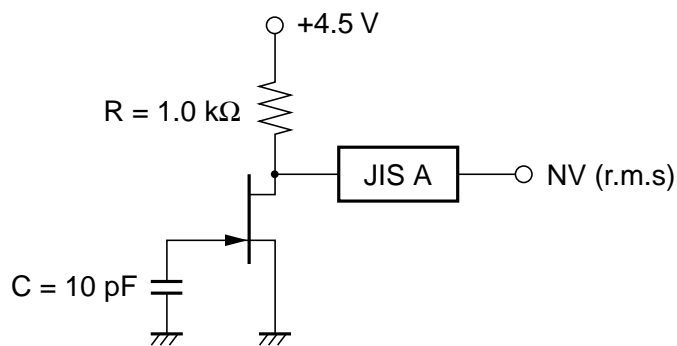
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**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C)**

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	150	250	430	μA
Gate Cut-off Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> = 5.0 V, I <sub>D</sub> = 1.0 μA		-0.4	-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	440		μS
	y <sub>fs2</sub>	V <sub>DS</sub> = 5.0 V, V <sub>GS</sub> = 0 V, f = 1.0 kHz	600	1400		μS
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 5.0 V, V <sub>GS</sub> = 0 V, f = 1.0 MHz		3.9		pF
Noise Voltage	NV	Refer to <b>NOISE VOLTAGE TEST CIRCUIT</b>		1.3	3.0	μV

**I<sub>DSS</sub> CLASSIFICATION**

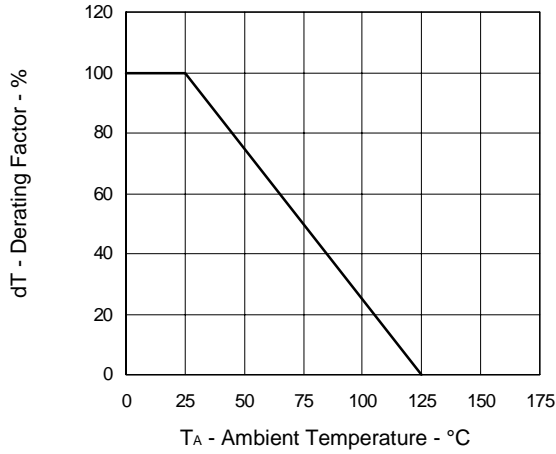
MARKING	F	H	J
I <sub>DSS</sub> (μA)	150 to 240	210 to 350	320 to 430

**NOISE VOLTAGE TEST CIRCUIT**

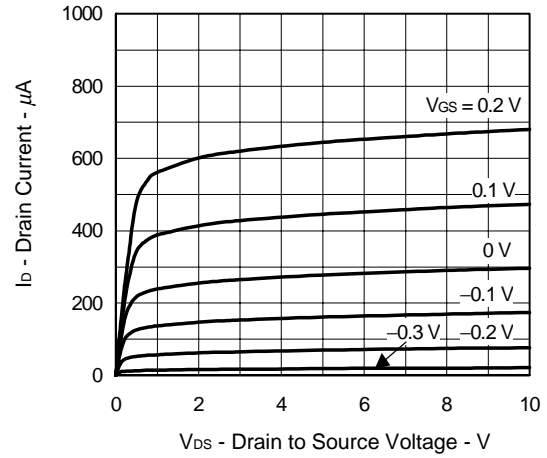


典型特性 (TA = 25°C)  
TYPICAL CHARACTERISTICS (TA = 25°C)

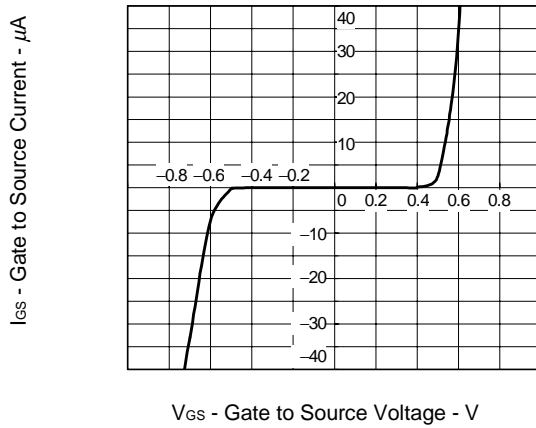
DRAIN FACTOR OF POWER DISSIPATION



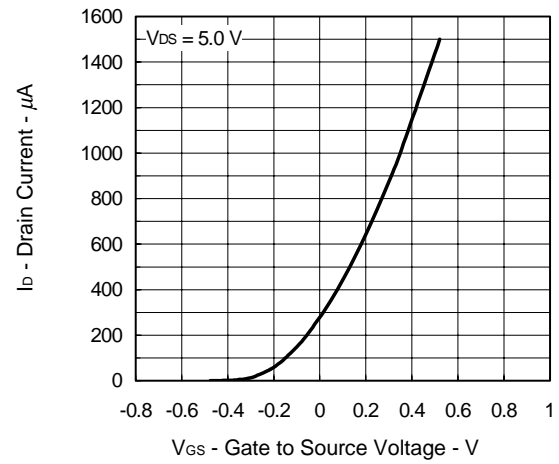
DRAIN CURRENT vs. DRAIN TO SOURCE VOLTAGE



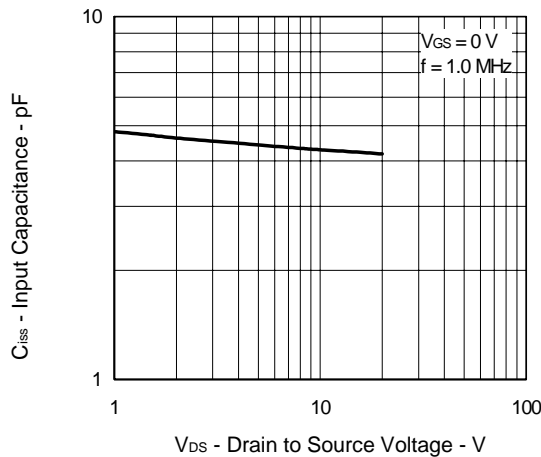
GATE TO SOURCE CURRENT vs. GATE TO SOURCE VOLTAGE



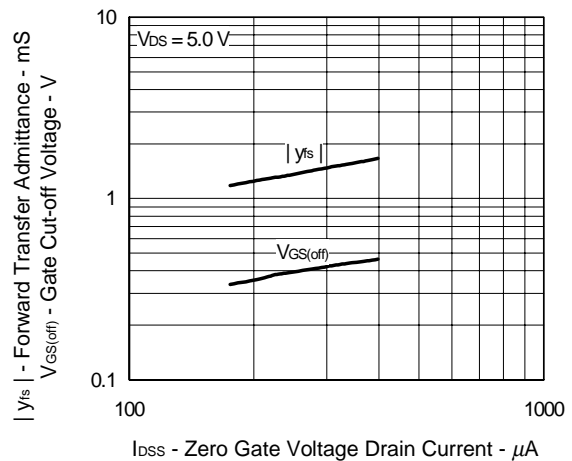
DRAIN CURRENT vs. GATE TO SOURCE VOLTAGE



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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