

MAR1109

The item can replace 2SK1109



Approved by:
Checked by:
Issued by:

SPECIFICATION

PRODUCT: N-channel MOSFET

MODEL: MAR1109 SOT23

HOPE MICROELECTRONIC CO.,LIMITED

MAR1109

The item can replace 2SK1109

DESCRIPTION

The MAR1109 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

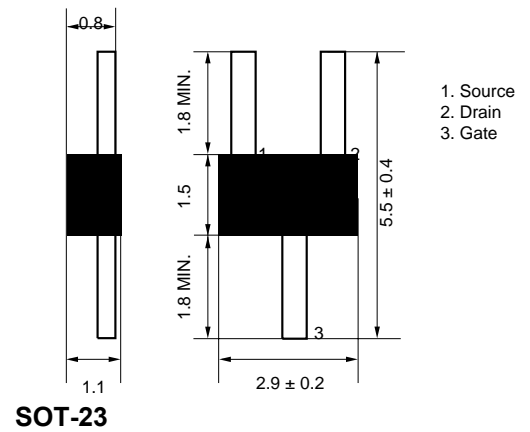
ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

Drain to Source Voltage ^{Note}	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}	80	mW
Junction Temperature	T_{J}	125	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

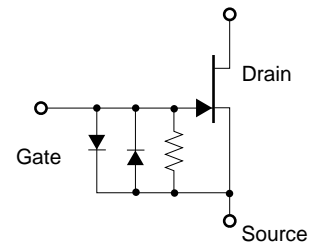
Note $V_{\text{GS}} = -1.0 \text{ V}$

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

PACKAGE DRAWING (Unit: mm)

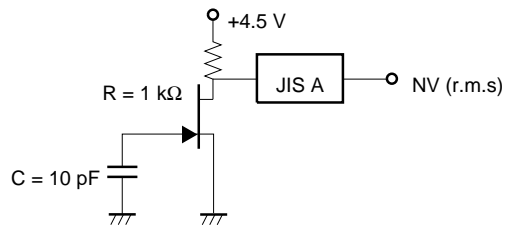


EQUIVALENT CIRCUIT



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

NOISE VOLTAGE TEST CIRCUIT

TYPICAL CHARACTERISTICS (T_A = 25°C)

