



# 2SK1239 — N-Channel GaAs MES FET 12GHz-Band Local Oscillator, Amplifier Applications

**Features**

- Metal package
- Low noise figure, high gain
- Adoption of high reliable protection film

**Absolute Maximum Ratings at Ta = 25°C**

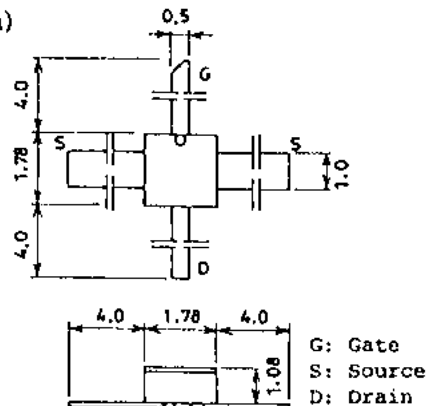
Parameter	Symbol	Value	unit
Drain to Source Voltage	V <sub>DS</sub>	5	V
Gate to Source Voltage	V <sub>GS</sub>	-5	V
Drain Current	I <sub>D</sub>	70	mA
Allowable Power Dissipation	P <sub>D</sub>	270	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-65 to +150	°C

**Electrical Characteristics at Ta = 25°C**

Parameter	Symbol	Test Conditions	min	typ	max	unit
Gate to Drain Breakdown Voltage	V <sub>(BR)GDS</sub>	I <sub>G</sub> = -10μA, V <sub>DS</sub> = 0V	-5			V
Gate Cutoff Current	I <sub>GSS</sub>	V <sub>GS</sub> = -3V, V <sub>DS</sub> = 0V			-10	μA
Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = 3V, V <sub>GS</sub> = 0V	20	30	60	mA
Gate to Source Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> = 3V, I <sub>D</sub> = 100μA	-0.5		-2.5	V
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>DS</sub> = 3V, I <sub>D</sub> = 10mA	35	40		mS
Noise Figure	NF	V <sub>DS</sub> = 3V, I <sub>D</sub> = 10mA, f = 12GHz		1.5		dB
Associated Gain	G <sub>a</sub>	V <sub>DS</sub> = 3V, I <sub>D</sub> = 10mA, f = 12GHz		8		dB
Maximum Available Power Gain	MAG	V <sub>DS</sub> = 3V, I <sub>D</sub> = 10mA, f = 12GHz		13		dB
Maximum Oscillation Frequency	f <sub>max</sub>	V <sub>DS</sub> = 3V, I <sub>D</sub> = 30mA		100		GHz

The application circuit diagrams and circuit constants herein are included as an example and provide no guarantee for designing equipment to be mass-produced. The information herein is believed to be accurate and reliable. However, no responsibility is assumed by SANYO for its use; nor for any infringements of patents or other rights of third parties which may result from its use.

Case Outline 2073  
(unit : mm)



Specifications and information herein are subject to change without notice.