

**SANYO**

No.3167

**2SK1238**

N-Channel GaAs MES FET

12GHz-Band Local Oscillator,  
Amplifier Applications**Features**

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

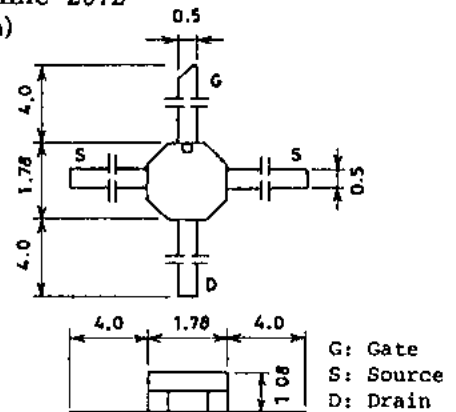
**Absolute Maximum Ratings at Ta = 25°C**

			unit
Drain to Source Voltage	$V_{DS}$	5	V
Gate to Source Voltage	$V_{GS}$	-5	V
Drain Current	$I_D$	70	mA
Allowable Power Dissipation	$P_D$	270	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-65 to +150	°C

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

		min	typ	max	unit
Gate to Drain Breakdown Voltage	$V_{(BR)GDS}$ $I_G = -10\mu A, V_{DS} = 0V$	-5			V
Gate Cutoff Current	$I_{GSS}$ $V_{GS} = -3V, V_{DS} = 0V$			-10	$\mu A$
Drain Current	$I_{DSS}$ $V_{DS} = 3V, V_{GS} = 0V$	20	30	60	mA
Gate to Source Cutoff Voltage	$V_{GS(off)}$ $V_{DS} = 3V, I_D = 100\mu A$	-0.5		-2.5	V
Forward Transfer Admittance	$ y_{fs} $ $V_{DS} = 3V, I_D = 10mA$	35	40		mS
Noise Figure	NF $V_{DS} = 3V, I_D = 10mA, f = 12GHz$		1.5		dB
Associated Gain	Ga $V_{DS} = 3V, I_D = 10mA, f = 12GHz$		8		dB
Maximum Available Power Gain	MAG $V_{DS} = 3V, I_D = 10mA, f = 12GHz$		13		dB
Maximum Oscillation Frequency	$f_{max}$ $V_{DS} = 3V, I_D = 30mA$		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 2072**  
(unit : mm)

Specifications and information herein are subject to change without notice.

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