

**SANYO**

No.3168

**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**

			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

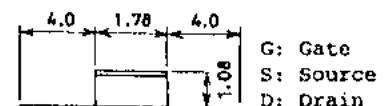
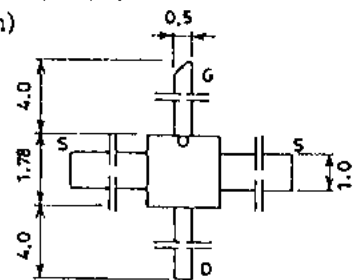
**Electrical Characteristics at Ta=25°C**

		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	Ga 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)



G: Gate  
S: Source  
D: Drain

Specifications and information herein are subject to change without notice.

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7219TA,TS No.3168-1/1