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N-Channel Junction Silicon FET

## 2SK2539 — High-Frequency Amplifier, Analog Switch Applications

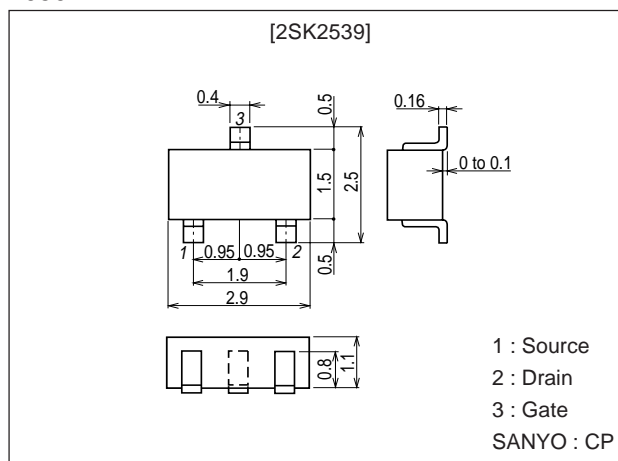
### Features

- Large  $|y_{fs}|$ .
- Small Ciss.
- Small-sized package permitting 2SK2539-applied sets to be made small and slim.
- Adoption of FBET process.

### Package Dimensions

unit:mm

2050A



### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSX}$		15	V
Gate-to-Drain Voltage	$V_{GDS}$		-15	V
Gate Current	$I_G$		5	mA
Drain Current	$I_D$		50	mA
Allowable Power Dissipation	$P_D$		200	mW
Junction Temperature	$T_J$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G = -10\mu A, V_{DS} = 0$	-15			V
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS} = -10V, V_{DS} = 0$			-1.0	nA
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 5V, V_{GS} = 0$	10.0*		50.0*	mA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 5V, I_D = 10\mu A$	-0.6	-1.4	-3.0	V
Forward Transfer Admittance	$ y_{fs} _1$	$V_{DS} = 5V, I_D = 10mA, f = 1kHz$	14	21		mS
	$ y_{fs} _2$	$V_{DS} = 5V, V_{GS} = 0, f = 1kHz$	14	29		mS

\* : The 2SK2539 is classified by  $I_{DSS}$  as follows : (unit : mA)

10.0	6	20.0	16.0	7	32.0	25.0	8	50.0
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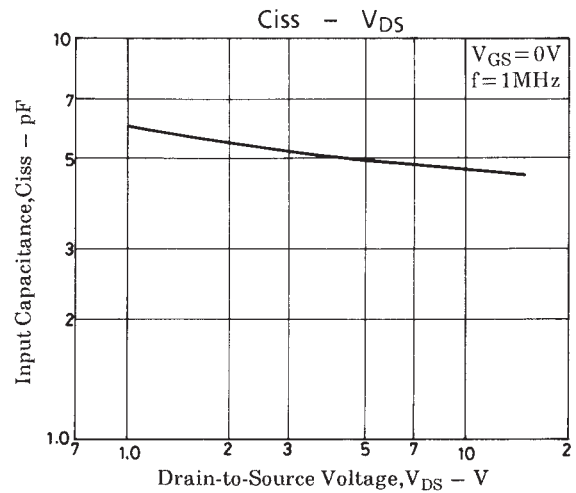
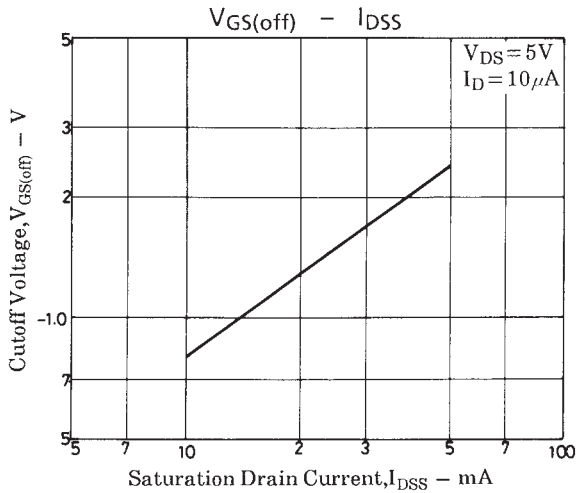
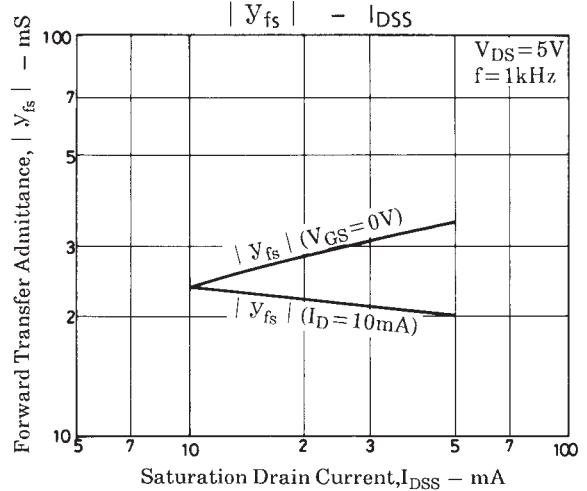
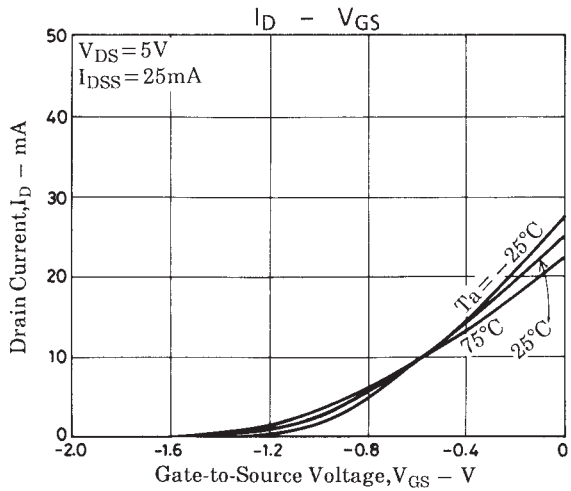
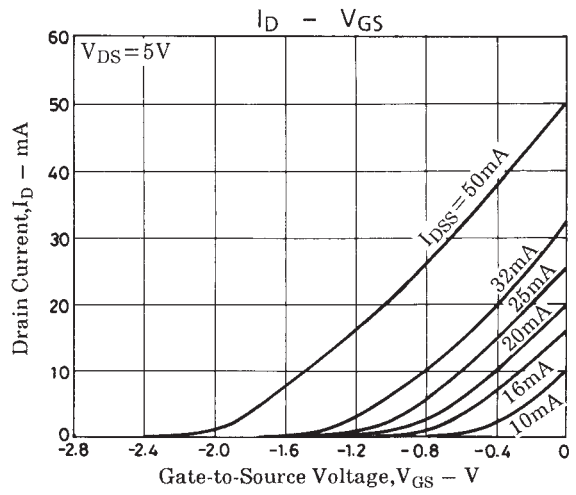
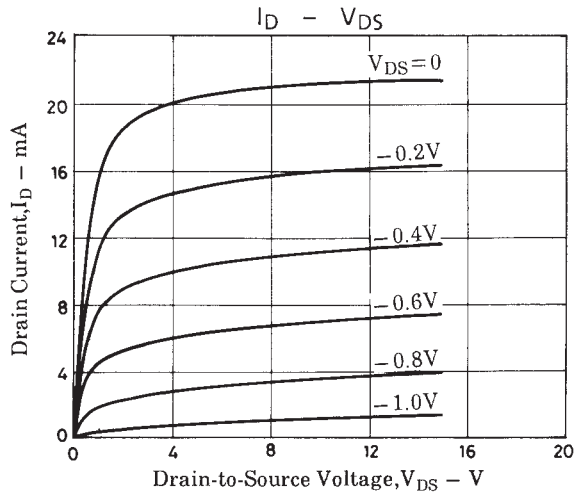
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Marking : AK  
 $I_{DSS}$  rank : 6, 7, 8

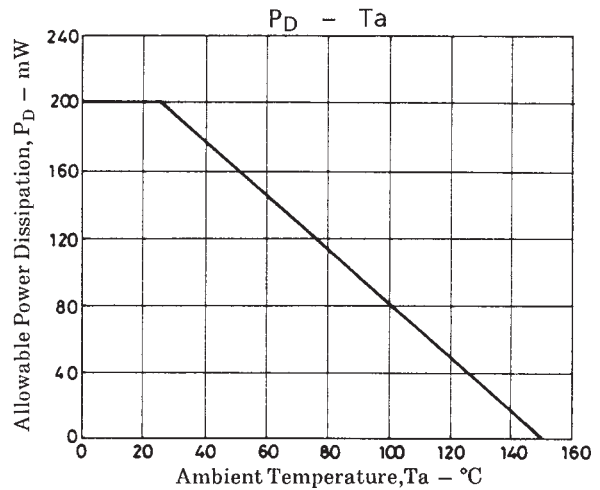
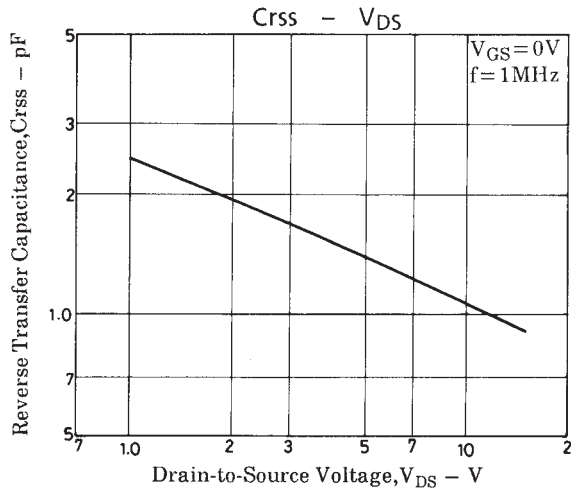
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	V <sub>DS</sub> =5V, V <sub>GS</sub> =0, f=1MHz		4.9		pF
Reverse Transfer Capacitance	Crss	V <sub>DS</sub> =5V, V <sub>GS</sub> =0, f=1MHz		1.4		pF



# 2SK2539



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