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DATA SHEET

N-Channel Junction Silicon FET

2SK2539 — High-Frequency Amplifier, Analog Switch Applications

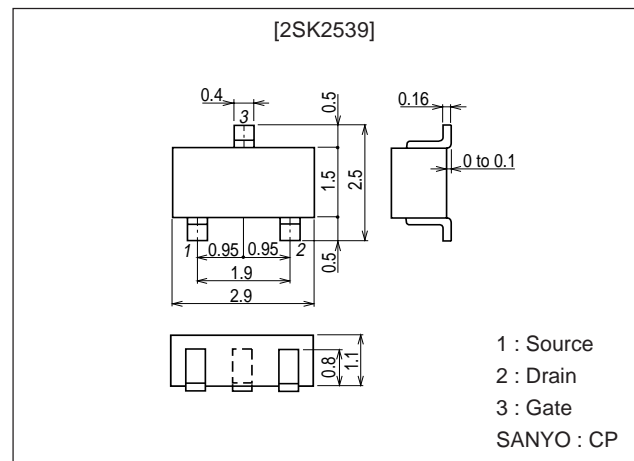
Features

- 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 $T_a = 25^\circ\text{C}$

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	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

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

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

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10.0	6	20.0	16.0	7	32.0	25.0	8	50.0
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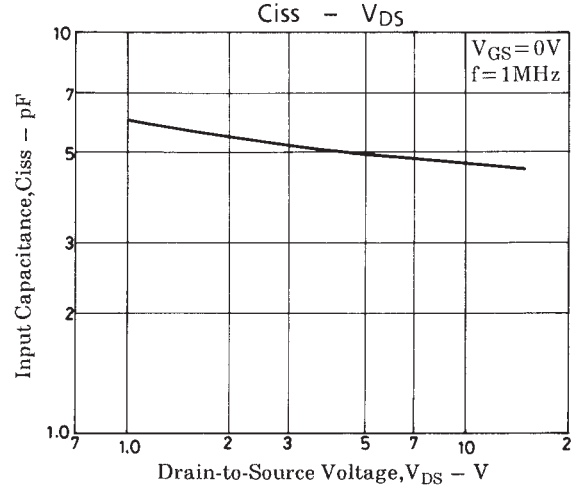
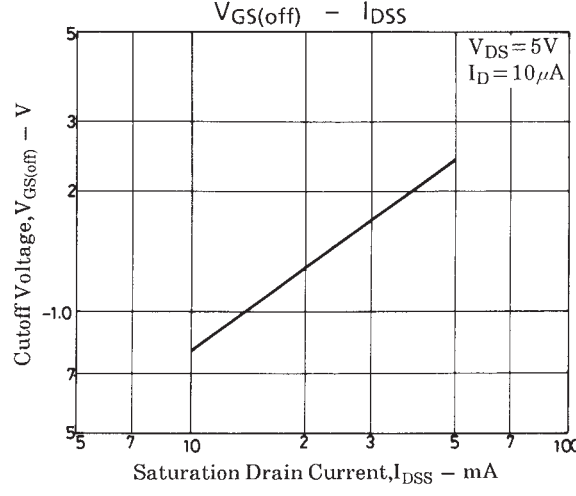
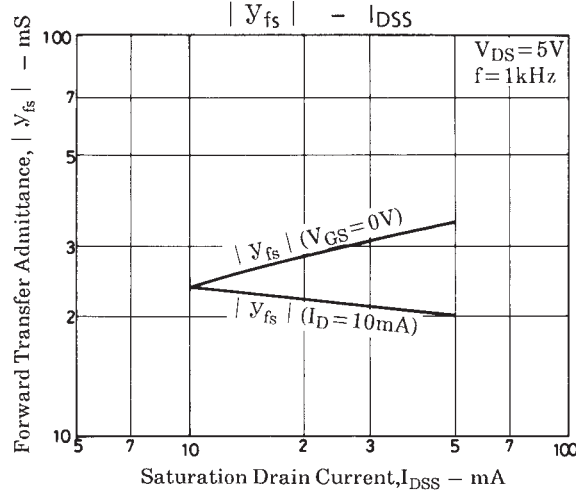
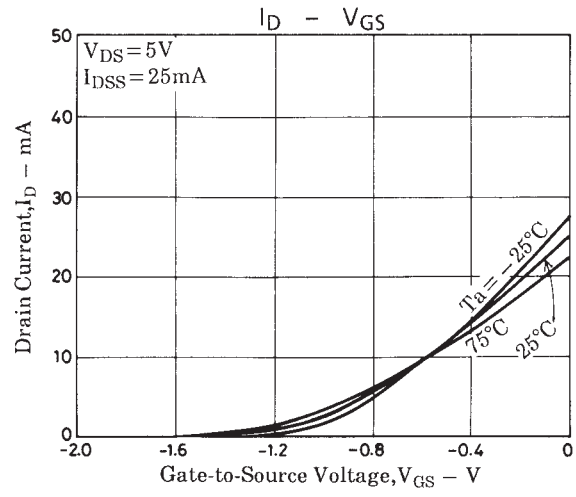
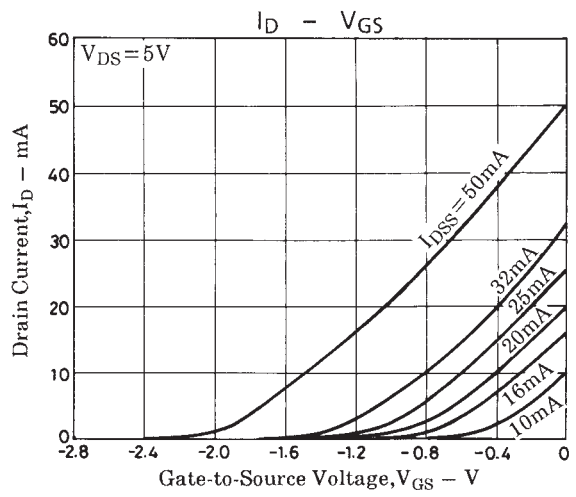
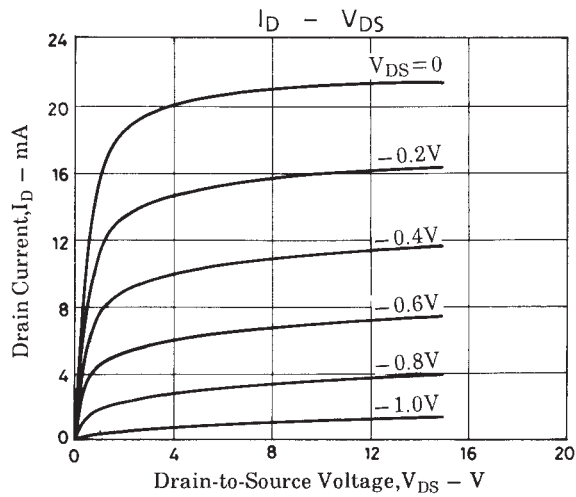
Marking : AK

 I_{DSS} rank : 6, 7, 8

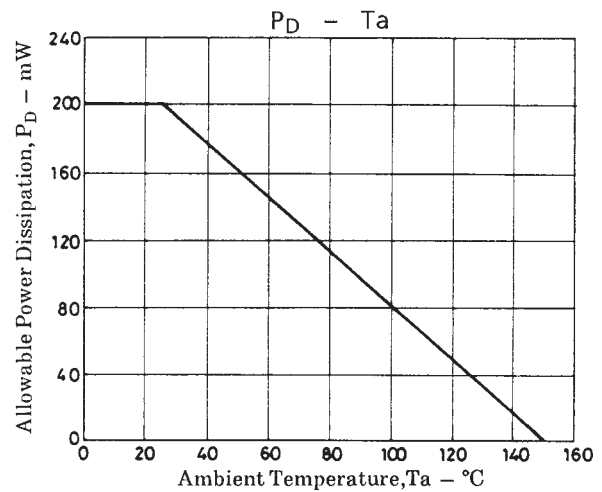
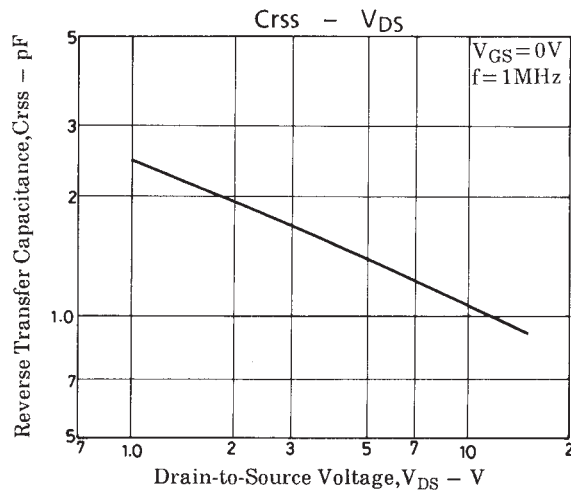
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS}=5V, V_{GS}=0, f=1MHz$		4.9		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=5V, V_{GS}=0, f=1MHz$		1.4		pF



2SK2539



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