Ordering number:EN2563C

N-Channel Enhancement Silicon MOSFET

2SK669

Very High-Speed Switch, Analog Switch Applications

Applications

· Analog switches, low-pass filters, Ultrahigh-speed switches.

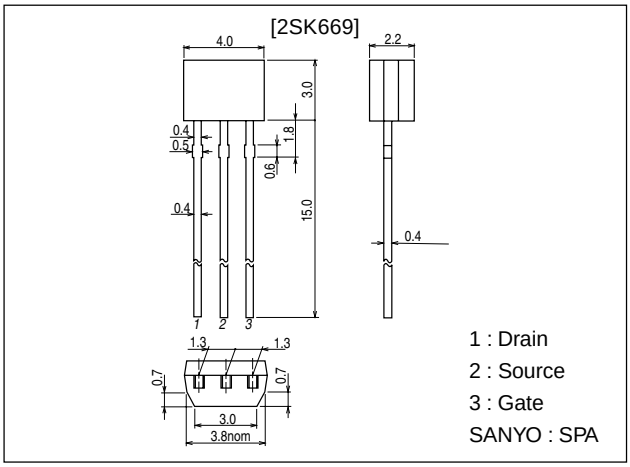
Features

· Large $|y_{fs}|$.
· Enhancemet type.
· Small ON resistance.

Package Dimensions

unit:mm

2040A



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DS}		50	V
Gate-to-Source Voltage	V_{GS}		±12	V
Drain Current	I_D		100	mA
Drain Current(Pulse)	I_{DP}		300	mA
Allowable Power Dissipation	P_D		200	mW
Channel Temperature	Tch		125	˚C
Storage Temperature	Tstg		–55 to +125	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Voltage	$V_{(BR)DS}$	I_D=10μA, V_{GS}=0	50			V
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=10V, V_{DS}=0		0.01	10	nA
Zero-Gate Voltage Drain Current	I_{DSS}*	V_{DS}=20V, V_{GS}=0V			1.0	μA
Cutoff Voltage	$V_{GS(off)}$	V_{DS}=10V, I_D=100μA	0.3	0.9	1.5	V
Forward Transfer Admittance	| yfs |	V_{DS}=10V, I_D=50mA, f=1kHz	25	40		mS
Input Capacitance	Ciss	V_{DS}=10V, V_{GS}=0, f=1MHz		15		pF
Output Capacitance	Coss	V_{DS}=10V, V_{GS}=0, f=1MHz		6		pF
Reverse Transfer Capacitance	Crss	V_{DS}=10V, V_{GS}=0, f=1MHz		0.5		pF
Drain-to-Source ON Resistance	$R_{DS(on)}$	V_{DS}=10V, I_D=10mA		20		Ω

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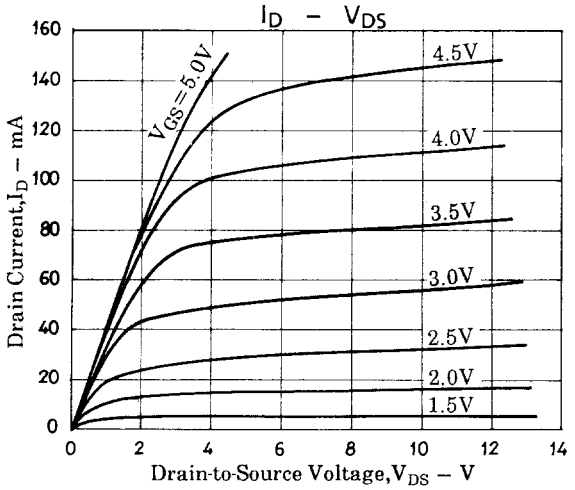
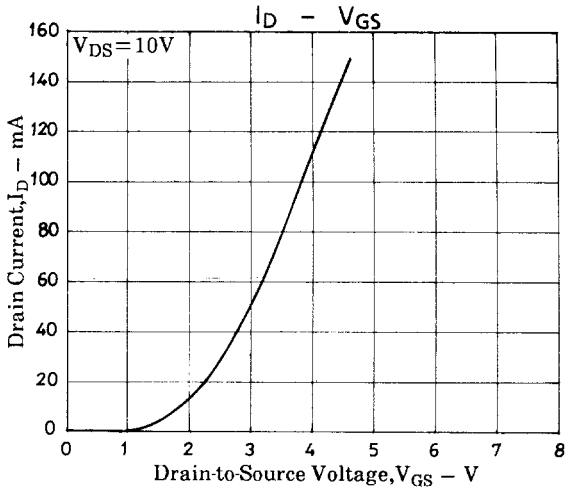
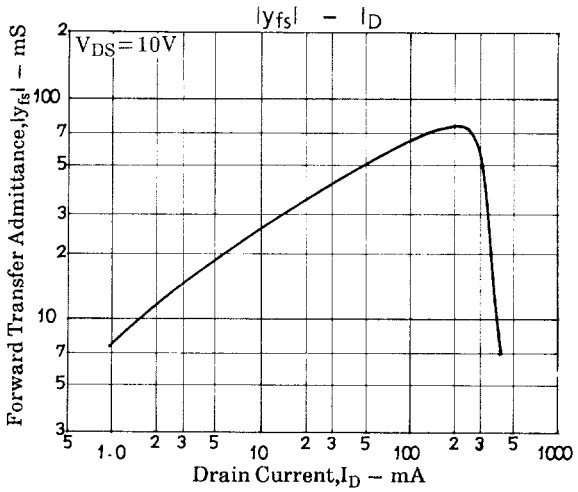
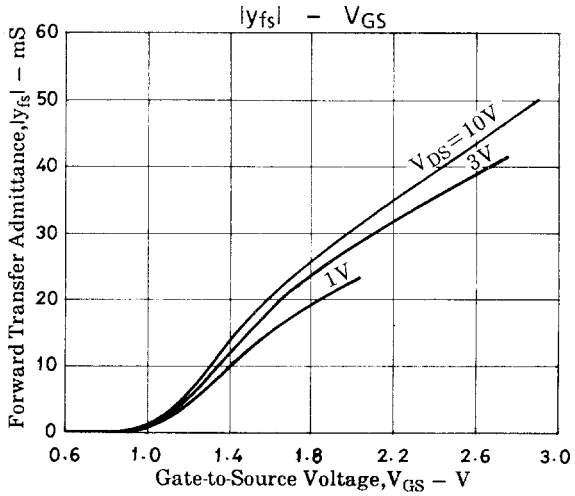
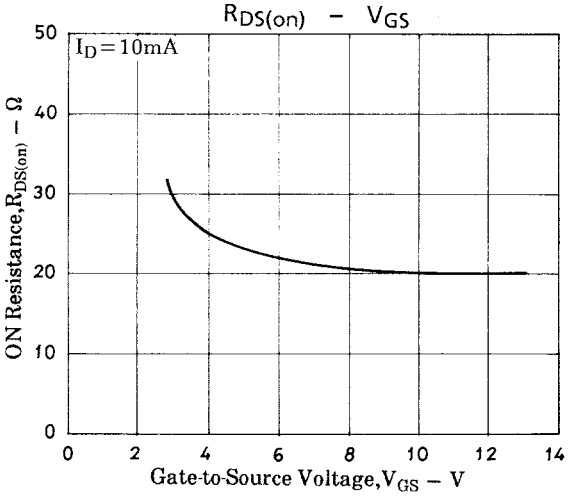
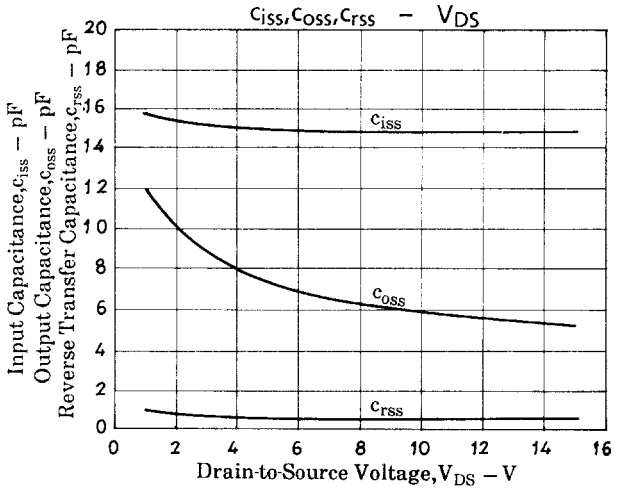

I_D – V_{DS}
Drain Current, I_D – mA
Drain-to-Source Voltage, V_{DS} – V
V_{GS}=5.0V
4.5V
4.0V
3.5V
3.0V
2.5V
2.0V
1.5V


I_D – V_{GS}
V_{DS}=10V
Drain Current, I_D – mA
Drain-to-Source Voltage, V_{GS} – V


|y_{fs}| – I_D
V_{DS}=10V
Forward Transfer Admittance, |y_{fs}| – mS
Drain Current, I_D – mA


|y_{fs}| – V_{GS}
V_{DS}=10V
3V
1V
Forward Transfer Admittance, |y_{fs}| – mS
Gate-to-Source Voltage, V_{GS} – V


$R_{DS(on)}$ – V_{GS}
I_D=10mA
ON Resistance, $R_{DS(on)}$ – Ω
Gate-to-Source Voltage, V_{GS} – V


C_{iss}, C_{oss}, C_{rss} – V_{DS}
C_{iss}
C_{oss}
C_{rss}
Input Capacitance, C_{iss} – pF
Output Capacitance, C_{oss} – pF
Reverse Transfer Capacitance, C_{rss} – pF
Drain-to-Source Voltage, V_{DS} – V