



ON Semiconductor®

# ON Semiconductor DATA SHEET

## 2SK669 — N-Channel Enhancement Silicon MOSFET Very High-Speed Switch, Analog Switch Applications

### Applications

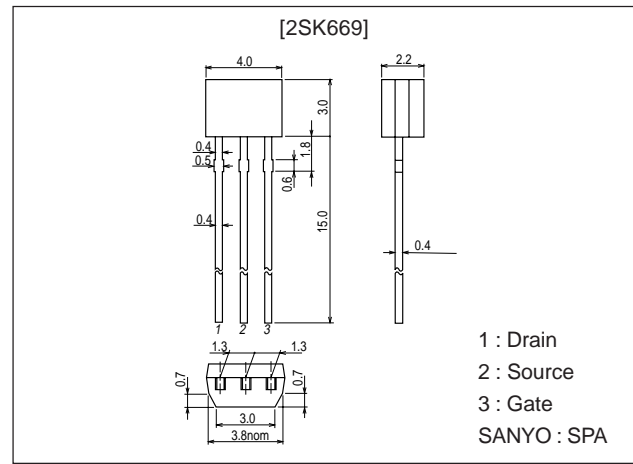
- Analog switches, low-pass filters, Ultrahigh-speed switches.

### Features

- Large  $|y_{fs}|$ .
- Enhancement type.
- Small ON resistance.

### Package Dimensions

unit:mm  
2040A



### Specifications

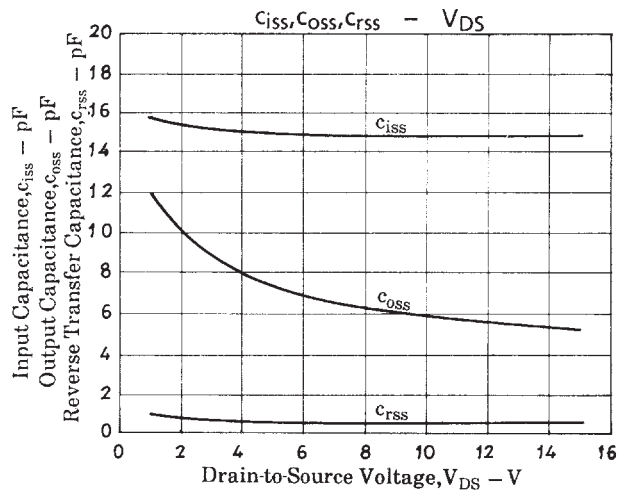
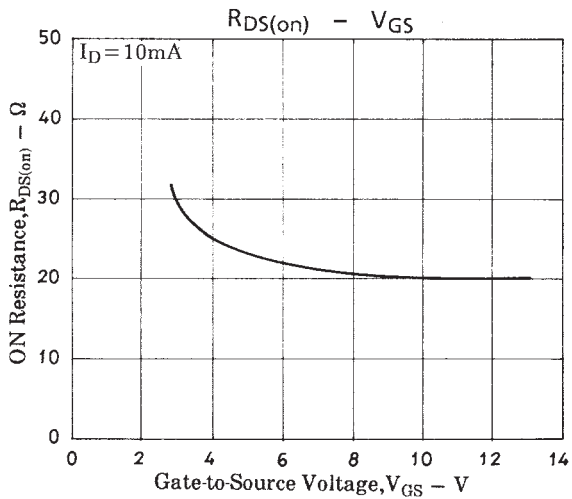
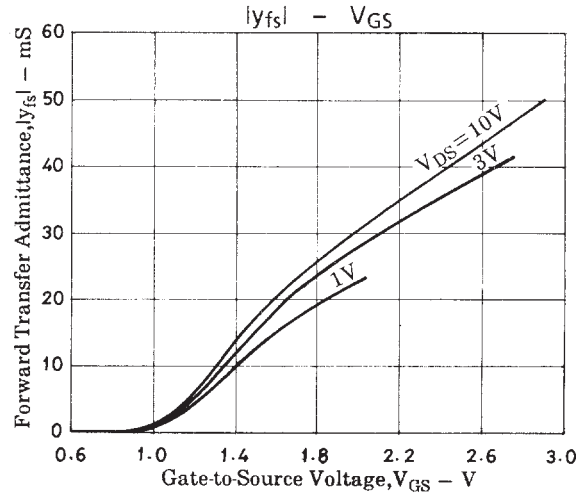
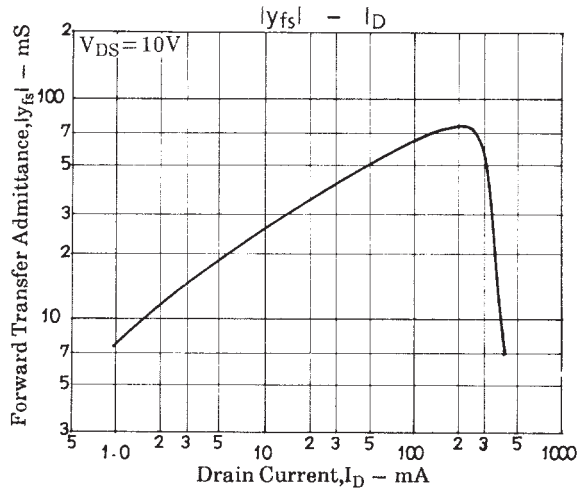
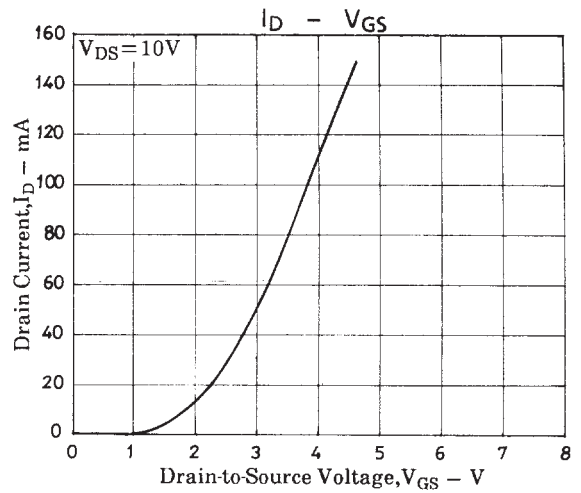
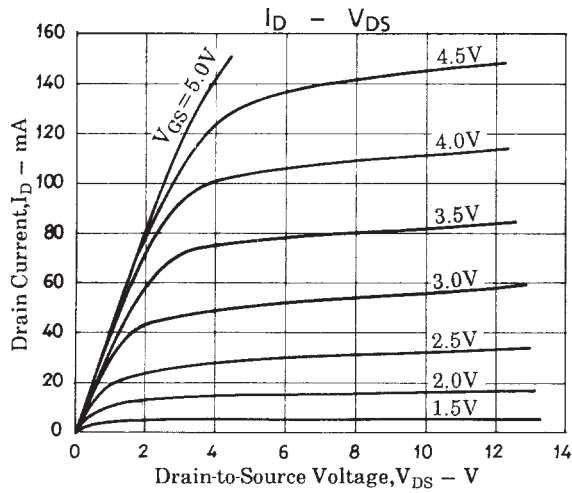
#### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DS}$		50	V
Gate-to-Source Voltage	$V_{GS}$		$\pm 12$	V
Drain Current	$I_D$		100	mA
Drain Current(Pulse)	$I_{DP}$		300	mA
Allowable Power Dissipation	$P_D$		200	mW
Channel Temperature	$T_{ch}$		125	°C
Storage Temperature	$T_{stg}$		-55 to +125	°C

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Voltage	$V_{(BR)DS}$	$I_D=10\mu A, V_{GS}=0$	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	$\mu A$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=100\mu A$	0.3	0.9	1.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=50mA, f=1kHz$	25	40		mS
Input Capacitance	$C_{iss}$	$V_{DS}=10V, V_{GS}=0, f=1MHz$		15		pF
Output Capacitance	$C_{oss}$	$V_{DS}=10V, V_{GS}=0, f=1MHz$		6		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=10V, V_{GS}=0, f=1MHz$		0.5		pF
Drain-to-Source ON Resistance	$R_{DS(on)}$	$V_{DS}=10V, I_D=10mA$		20		$\Omega$

# 2SK669



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