

**2SK1841**

Ultrahigh-Speed Switching, Analog Switch Applications

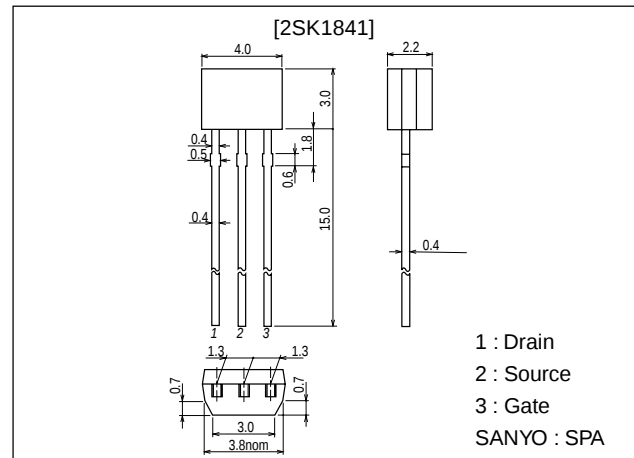
Features

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

Package Dimensions

unit:mm

2040A



Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		30	V
Gate-to-Source Voltage	V_{GSS}		± 12	V
Drain Current (DC)	I_D		100	mA
Drain Current (pulse)	I_{DP}		300	mA
Allowable Power Dissipation	P_D		200	mW
Channel Temperature	T_{ch}		125	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +125	$^\circ\text{C}$

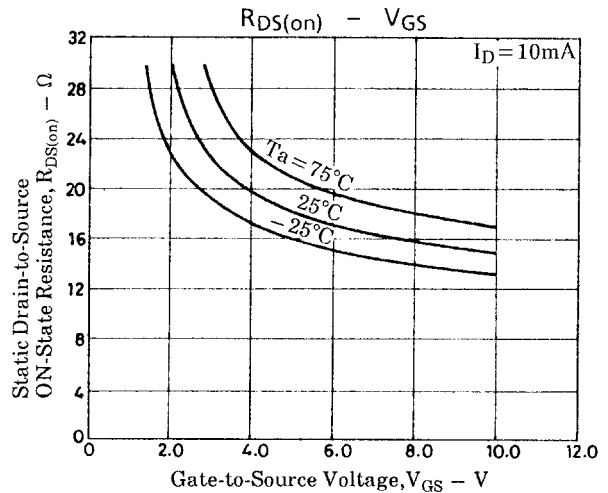
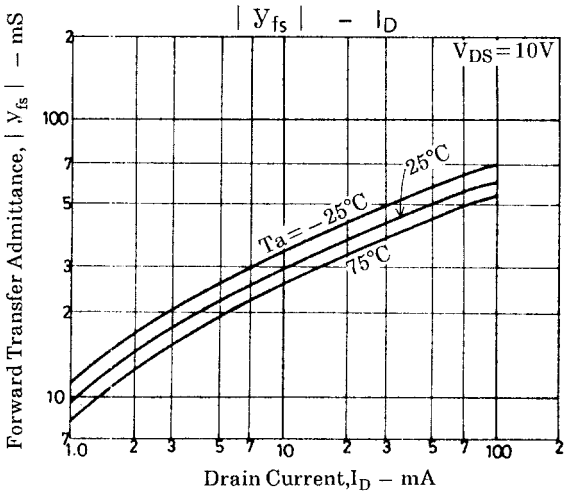
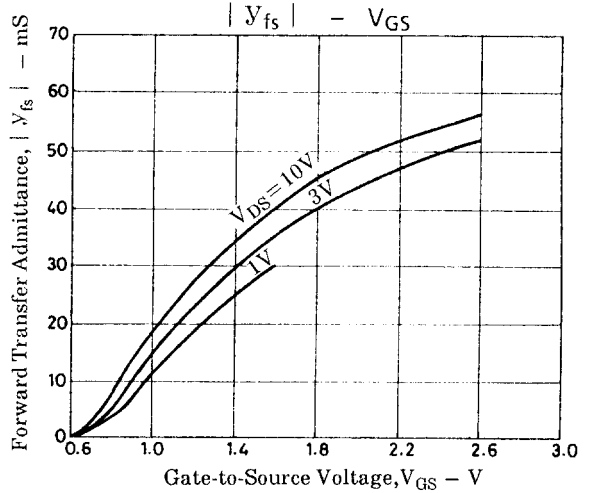
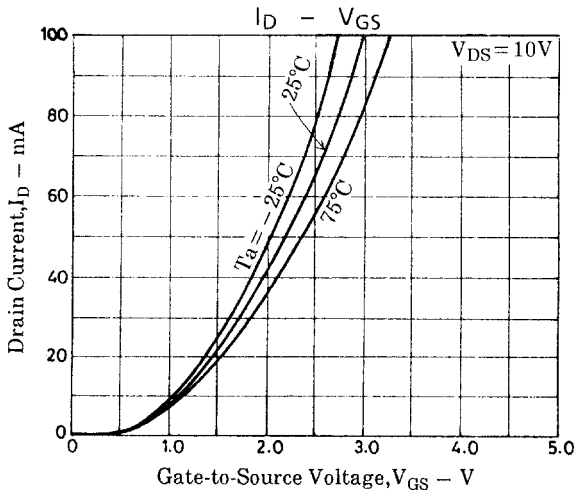
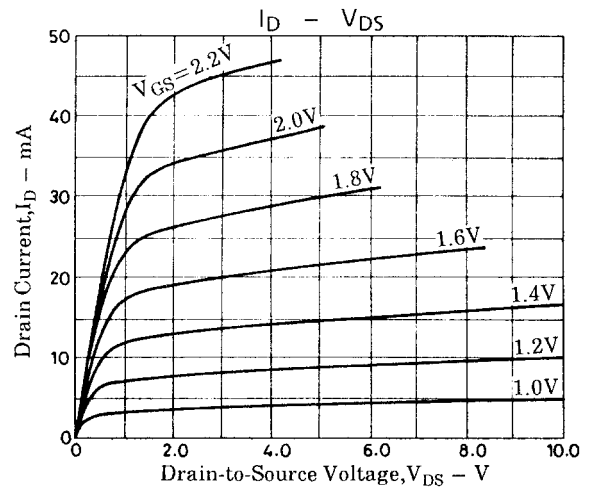
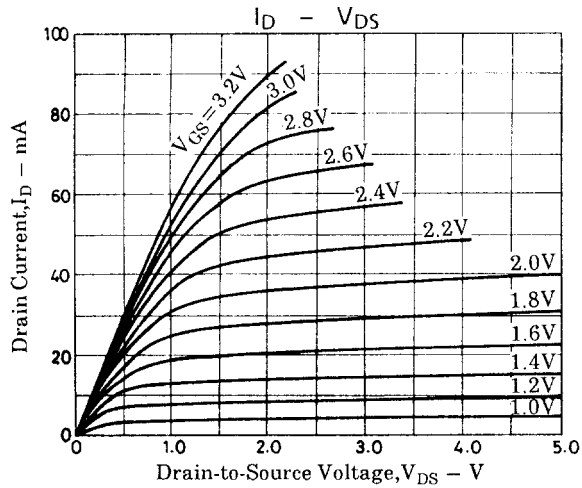
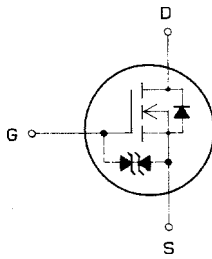
Electrical Characteristics at $T_a = 25^\circ\text{C}$

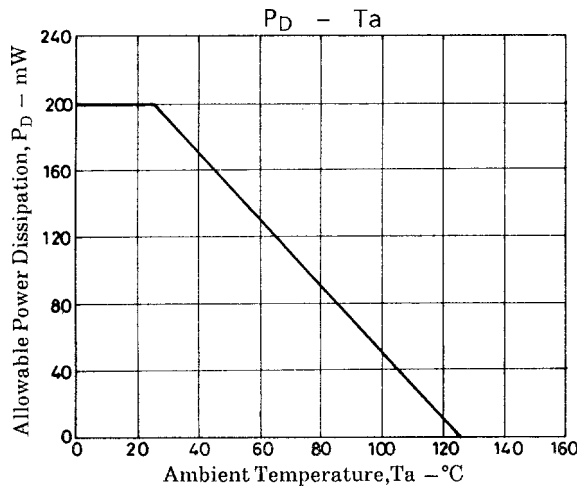
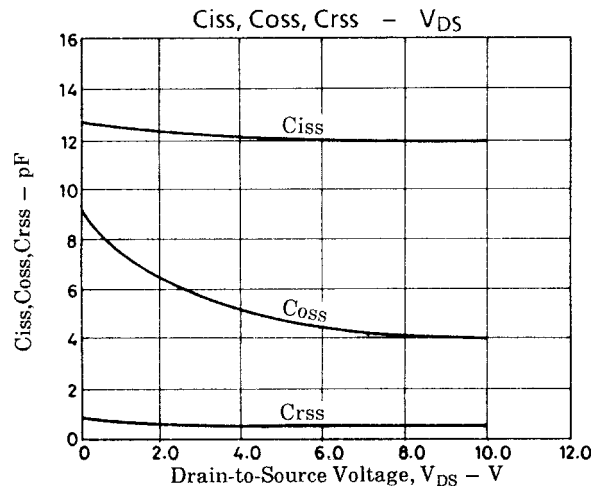
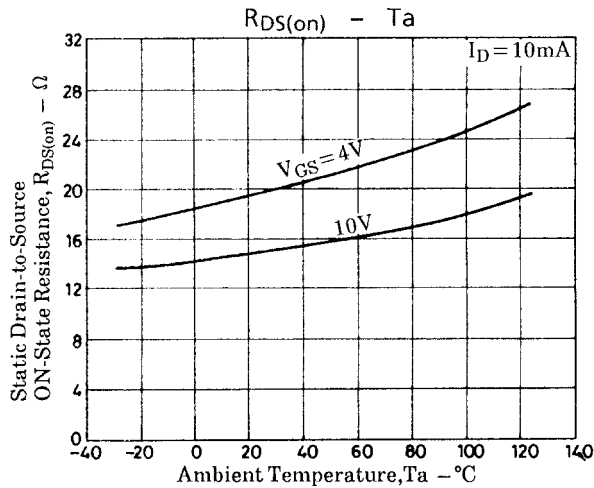
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=10\mu\text{A}$, $V_{GS}=0$	30			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=15\text{V}$, $V_{GS}=0$			1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 10\text{V}$, $V_{DS}=0$		0.01	± 10	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}$, $I_D=100\mu\text{A}$	0.3	0.9	1.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}$, $I_D=50\text{mA}$, $f=1\text{kHz}$	25	50		mS
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}$, $I_D=10\text{mA}$		15	25	Ω
Input Capacitance	C_{iss}	$V_{DS}=10\text{V}$, $V_{GS}=0$, $f=1\text{MHz}$		12		pF
Output Capacitance	C_{oss}	$V_{DS}=10\text{V}$, $V_{GS}=0$, $f=1\text{MHz}$		4		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=10\text{V}$, $V_{GS}=0$, $f=1\text{MHz}$		0.4		pF

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Electrical Connection





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