

Analog Switch Applications

Applications

- Analog switches, low-pass filters.

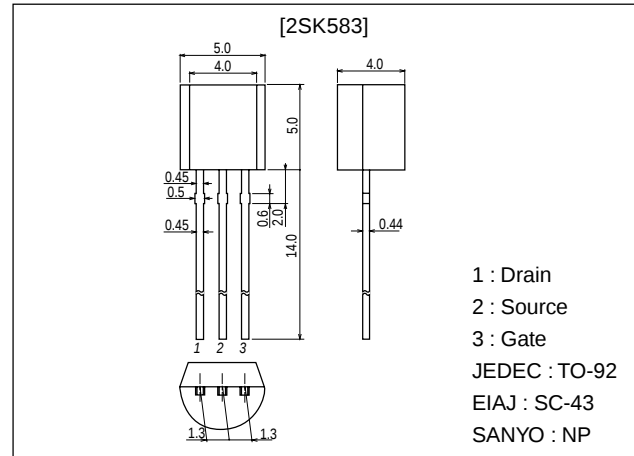
Features

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

Package Dimensions

unit:mm

2005C



Specifications

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

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		200	mA
Drain Current(Pulse)	I_{DP}		300	mA
Allowable Power Dissipation	P_D		600	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 Voltage	$V_{(BR)DS}$	$I_D=10\mu\text{A}$, $V_{GS}=0\text{V}$	50			V
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=10\text{V}$, $V_{DS}=0\text{V}$		0.01	10	nA
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=20\text{V}$, $V_{GS}=0\text{V}$			1	μA
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	40		mS
Input Capacitance	C_{iss}	$V_{DS}=10\text{V}$, $V_{GS}=0$, $f=1\text{MHz}$		15		pF
Output Capacitance	C_{oss}	$V_{DS}=10\text{V}$, $V_{GS}=0$, $f=1\text{MHz}$		6		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=10\text{V}$, $V_{GS}=0$, $f=1\text{MHz}$		0.5		pF
Drain-to-Source ON Resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}$, $I_D=10\text{mA}$		20		Ω

