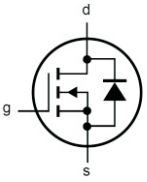
TY Semicondutor®

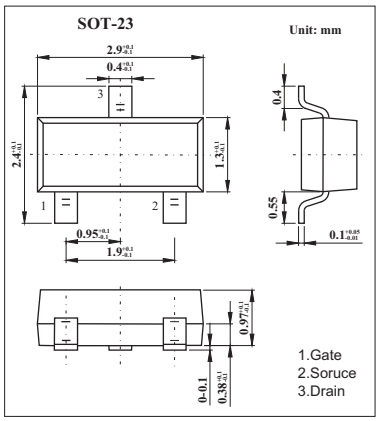
Product specification

2N7000

■ Features

- High density cell design for low $R_{DS(ON)}$
- Voltage controlled small signal switch
- Rugged and reliable
- High saturation current capability





■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain-Source voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	±20	V
Drain Current - Continuous	I_D	200	mA
- Pulsed Note(1)		500	
Power dissipation @ T_A = 25℃	P_D	0.4	W
Operating and storage junction temperature range	T_J, T_{stg}	-55 to +150	℃

Notes: 1. Pulse width limited by maximum junction temperature.

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test conditons	Min	Typ	Max	Unit
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS}=0 V, I_D=10 μA	60			V
Gate-threshold voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=1mA	0.8	2.1	3	
Gate-body leakage	I_{GSS}	V_{DS}=0 V, V_{GS}=±20 V			±100	nA
Zero gate voltage drain current	I_{DSS}	V_{DS}=48 V, V_{GS}=0 V			1	μA
		T_C = 125℃			1000	μA
On-state drain current	$I_{D(ON)}$	V_{GS}=4.5 V, V_{DS}=10 V		0.35	0.075	A
Drain-source on-resistance	$R_{DS(on)}$	V_{GS}=10 V, I_D=500 mA			5	Ω
		V_{GS}=4.5 V, I_D=75 mA			5.3	
Forward tran conductance	g_{ts}	V_{DS}=10 V, I_D=200 mA	100			ms
Input capacitance	C_{iss}	V_{DS}=25 V, V_{GS}=0 V, f=1 MHz		22	60	pF
Output capacitance	C_{oss}			11	25	
Reverse transfer capacitance	C_{rss}			2	5	
Turn-on Time	$t_{d(on)}$	V_{DD} = 15 V, R_L = 25 Ω			10	ns
Turn-off Time	$t_{d(off)}$	I_D =0.5 A, V_{GEN} = 10 V, R_G = 25Ω			10	ns

■ Marking

Marking	702