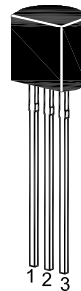
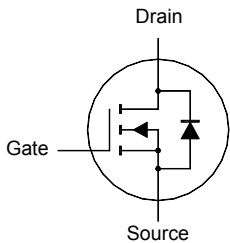


ST 2N7000

Small Signal MOSFET

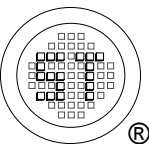
200 mA, 60 V
N-Channel



1. Source 2. Gate 3. Drain
TO-92 Plastic Package

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

Parameter	Symbol	Value	Unit
Drain Source Voltage	V_{DSS}	60	V
Drain-Gate Voltage ($R_{GS} = 1\text{ M}\Omega$)	V_{DGR}	60	V
Gate-source Voltage	Continuous V_{GS}	± 20	V
	Non-repetitive ($t_p \leq 50\text{ }\mu\text{s}$) V_{GSM}	± 40	V
Drain Current	Continuous I_D	200	mA
	Pulsed I_{DM}	500	mA
Total Power Dissipation	P_D	350	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$



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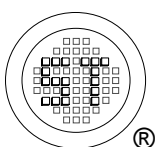


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ST 2N7000

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

Parameter	Symbol	Min.	Max.	Unit
Drain-Source Breakdown Voltage at $V_{GS} = 0$, $I_D = 10\ \mu\text{A}$	$V_{(BR)DSS}$	60	-	V
Zero Gate Voltage Drain Current at $V_{DS} = 48\ \text{V}$, $V_{GS} = 0$	I_{DSS}	-	1	μA
Gate-Body Leakage Current at $V_{GS} = \pm 15\ \text{V}$, $V_{DS} = 0$	$\pm I_{GSS}$	-	10	nA
Gate Threshold Voltage at $V_{DS} = V_{GS}$, $I_D = 1\ \text{mA}$	$V_{GS(th)}$	0.8	3	V
Static Drain-Source On-Resistance at $V_{GS} = 10\ \text{V}$, $I_D = 500\ \text{mA}$ at $V_{GS} = 4.5\ \text{V}$, $I_D = 75\ \text{mA}$	$r_{DS(on)}$	- -	5 6	Ω
Drain-Source On-Voltage at $V_{GS} = 10\ \text{V}$, $I_D = 500\ \text{mA}$ at $V_{GS} = 4.5\ \text{V}$, $I_D = 75\ \text{mA}$	$V_{DS(on)}$	- -	2.5 0.45	V
On-State Drain Current at $V_{GS} = 4.5\ \text{V}$, $V_{DS} = 10\ \text{V}$	$I_{D(on)}$	75	-	mA
Forward Transconductance at $V_{DS} = 10\ \text{V}$, $I_D = 200\ \text{mA}$	g_{fs}	100	-	mS
Input Capacitance at $V_{DS} = 25\ \text{V}$, $V_{GS} = 0$, $f = 1\ \text{MHz}$	C_{iss}	-	60	pF
Output Capacitance at $V_{DS} = 25\ \text{V}$, $V_{GS} = 0$, $f = 1\ \text{MHz}$	C_{oss}	-	25	pF
Reverse Transfer Capacitance at $V_{DS} = 25\ \text{V}$, $V_{GS} = 0$, $f = 1\ \text{MHz}$	C_{rss}	-	5	pF
Turn-On Delay Time at $V_{DD} = 15\ \text{V}$, $I_D = 500\ \text{mA}$, $R_G = 25\ \Omega$, $R_L = 30\ \Omega$, $V_{gen} = 10\text{V}$	t_{on}	-	10	ns
Turn-Off Delay Time at $V_{DD} = 15\ \text{V}$, $I_D = 500\ \text{mA}$, $R_G = 25\ \Omega$, $R_L = 30\ \Omega$, $V_{gen} = 10\text{V}$	t_{off}	-	10	ns



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