N Channel Small Signal MOSFET   **2N7002**

100mA

SOT-23
1 Gate
2 Source
3 Drain

- DRIVES SWITCHS, RELAYS, SOLENOIDS, LAMPS, DISPLAYS, ETC.
- LOW OFFSET VOLTAGE
- LOW VOLTAGE OPERATION
- EASILY DRIVEN WITHOUT BUFFER

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS   Ta=25

PARAMETERS	SYMBOL	MIN	MAX	UNIT	CONDITION
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	60		Vdc	$V_{GS}=0$, $I_D=10uA$
Zero Gate Voltage Drain Current	I_{DSS}		1.0	uA	$V_{DS}=48V$, $V_{GS}=0$
			1.0	mA	$V_{DS}=48V$, $V_{GS}=0$, Tj=125
Gate-Body Leakage Current, Forward	I_{GSSF}		-10	nA	$V_{GSF}=15V$, $V_{DS}=0$
Gate Threshhold Voltage	$V_{GS(th)}$	0.8	3.0	V	$V_{DS}=V_{GS}$, $I_D=1.0A$
Drain-Source On-Resistance	$R_{DS(on)}$		7.5	Ohm	$V_{GS}=10V$, $I_D=0.5A$
			7.5	Ohm	$V_{GS}=4.5V$, $I_D=75mA$
Drain-Source On-Voltage	$V_{DS(on)}$		2.5	V	$V_{GS}=10V$, $I_D=0.5A$
			0.45		$V_{GS}=4.5V$, $I_D=75mA$
On-State Drain Current	$I_{d(on)}$	75		mA	$V_{GS}=4.5V$, $V_{DS}=10V$
Input Capacitance	C_{iss}		60	pF	$V_{DS}=25V$, $V_{GS}=0$, f=1 MHz
Output Capacitance	C_{oss}		25	pF	$V_{DS}=25V$, $V_{GS}=0$, f=1 MHz
Reverse Transfer Capacitance	C_{rss}		5	pF	$V_{DS}=25V$, $V_{GS}=0$, f=1 MHz
Turn-On Delay Time	t_{on}		10	nS	
Turn-Off Delay Time	t_{off}		10	nS	
Power Dissipation	Pc		0.35	W	
Junction Temperature	Tj		125		
Storage Temperature	Tstg	-55	125		

Output Characteristics
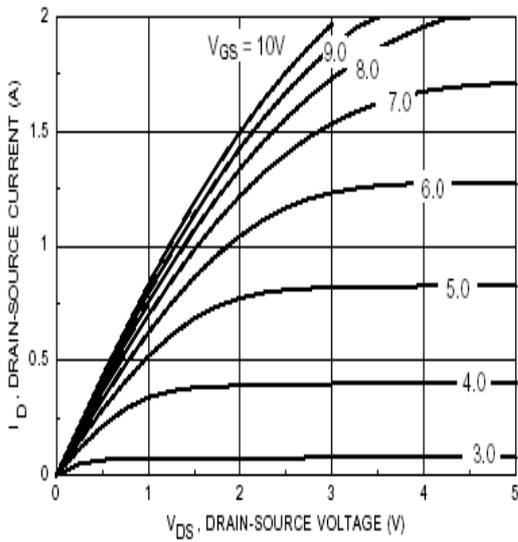
Transfer Characteristics
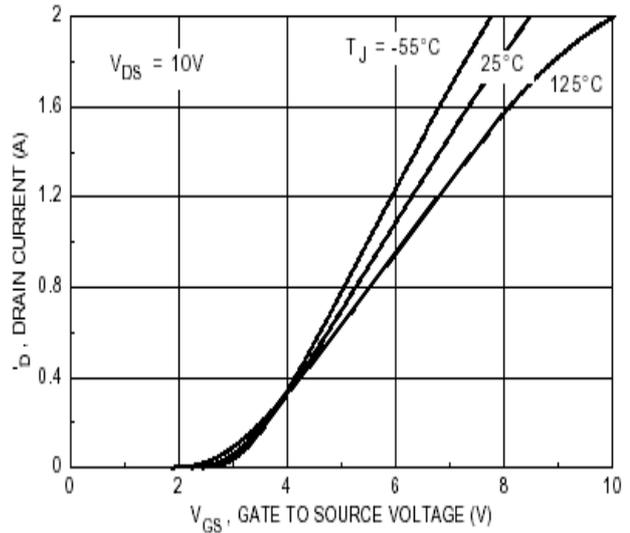

On Resistance VS. Temperature
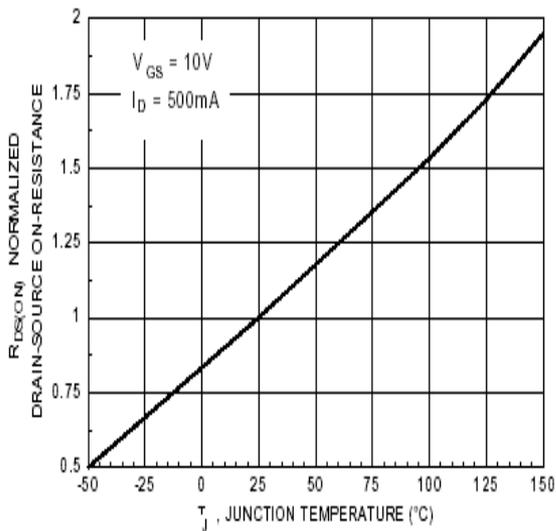
Static Drain-source On Resistance
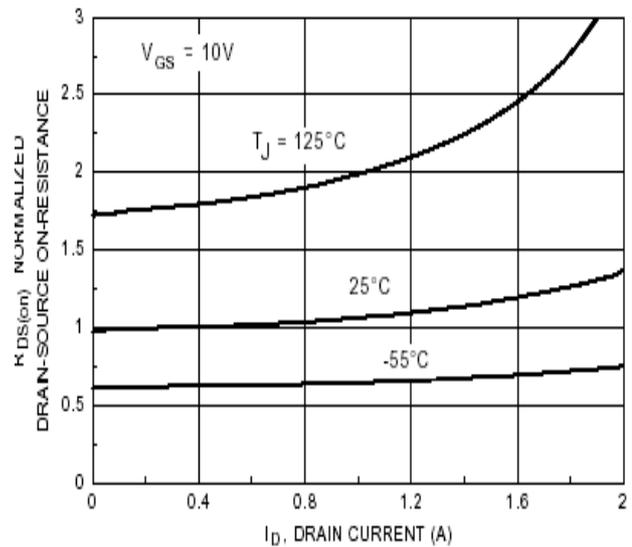
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