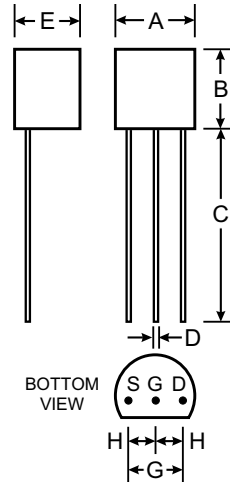


Features

- High Input Impedance
- Fast Switching Speed
- CMOS Logic Compatible Input
- No Thermal Runaway or Secondary Breakdown

Mechanical Data

- Case: TO-92, Plastic
- Leads: Solderable per MIL-STD-202, Method 208
- Pin Connection: See Diagram
- Approx Weight: 0.18 grams



TO-92		
Dim	Min	Max
A	4.45	4.70
B	4.46	4.70
C	12.7	—
D	0.41	0.63
E	3.43	3.68
G	2.42	2.67
H	1.14	1.40
All Dimensions in mm		

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Drain-Source Voltage	$-V_{DSS}$	60	V
Drain-Gate Voltage	$-V_{DGS}$	60	V
Gate-Source-Voltage (pulsed)	V_{GS}	± 20	V
Drain Current (continuous)	$-I_D$	250	mA
Power Dissipation @ $T_C = 25^\circ\text{C}$ (Note 1)	P_d	830	mW
Operating and Storage Temperature Range	T_j, T_{STG}	-55 +150	$^\circ\text{C}$

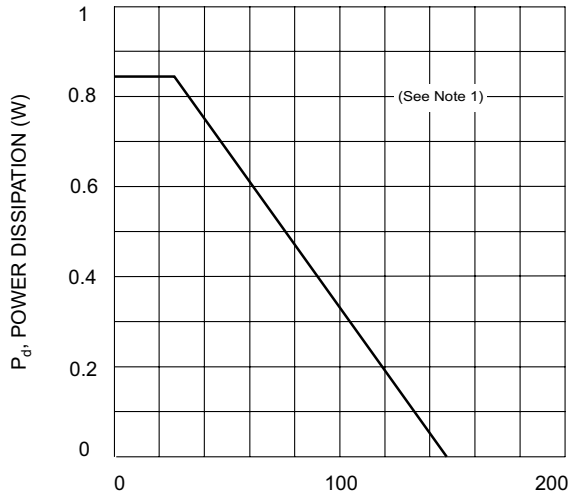
Inverse Diode @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Maximum Forward Current (continuous)	I_F	0.15	A
Forward Voltage Drop (Typ.) @ $V_{GS} = 0, I_F = 0.15\text{A}, T_j = 25^\circ\text{C}$	V_F	0.85	V

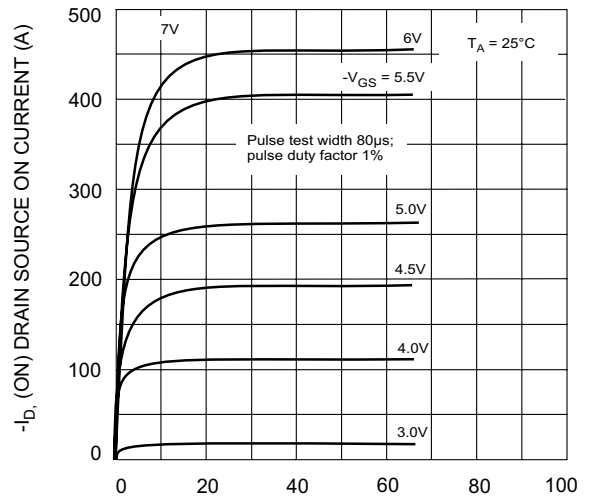
Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Drain-Source Breakdown Voltage	$-V_{(BR)DSS}$	60	70	—	V	$I_D = 100\mu\text{A}, V_{GS} = 0$
Gate Threshold Voltage	$-V_{GS(th)}$	—	1.0	3.0	V	$V_{GS} = V_{DS}, -I_D = 1.0\text{mA}$
Gate-Body Leakage Current	$-I_{GSS}$	—	—	20	nA	$-V_{GS} = 15\text{V}, V_{DS} = 0$
Drain-Source Cutoff Current	$-I_{DSS}$	—	—	0.5	μA	$-V_{DS} = 25\text{V}, V_{GS} = 0$
Drain-Source ON Resistance	$r_{DS(ON)}$	—	3.5	5.0	Ω	$-V_{GS} = 10\text{V}, -I_D = 0.2\text{A}$
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	—	—	150	K/W	Note 1
Forward Transconductance	g_{FS}	—	150	—	mS	$-V_{DS} = 10\text{V}, -I_D = 0.2\text{A}, f = 1.0\text{MHz}$
Input Capacitance	C_{iss}	—	60	—	pF	$-V_{DS} = 10\text{V}, V_{GS} = 0, f = 1.0\text{MHz}$
Switching Times Turn On Time Turn Off Time	t_{on} t_{off}	— —	5 25	— —	ns	$-V_{GS} = 10\text{V}, -V_{DS} = 10\text{V}, R_D = 100\Omega$

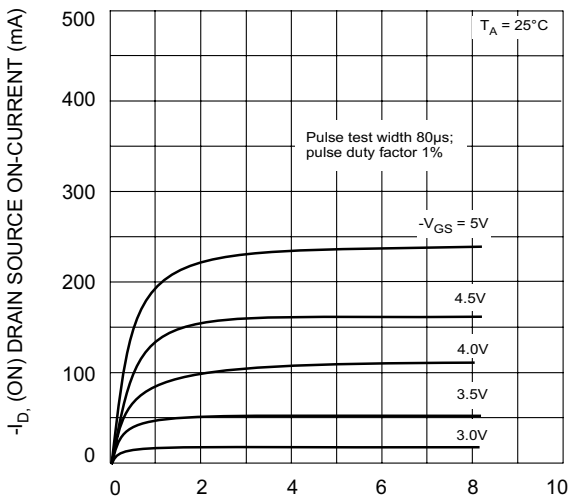
Notes: 1. Valid provided that leads are kept at ambient temperature at a distance of 2mm from case.



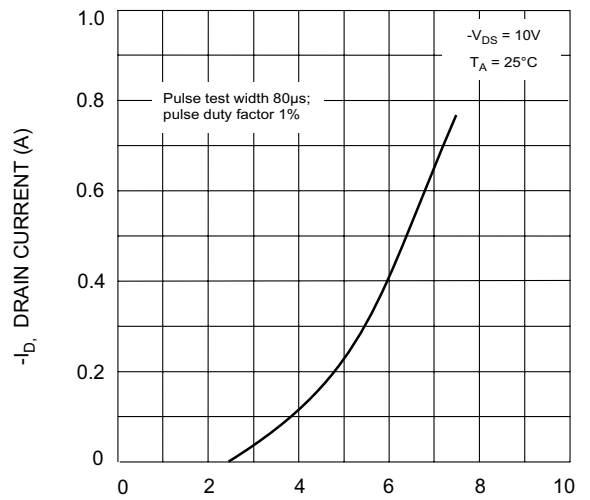
T_A , AMBIENT TEMPERATURE (°C)
Fig. 1, Power Derating Curve



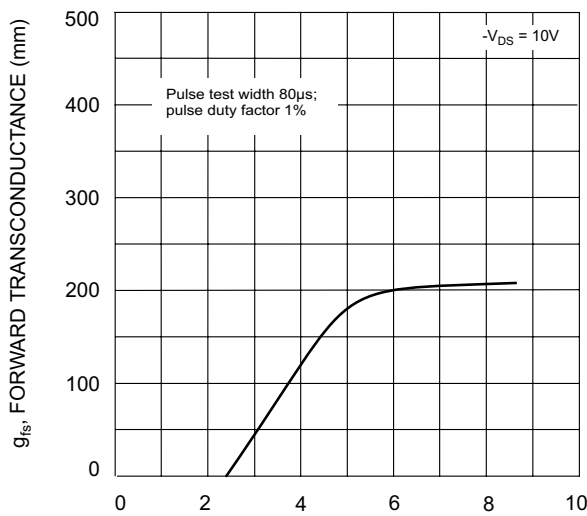
$-V_{DS}$, DRAIN-SOURCE VOLTAGE (V)
Fig. 2, Output Characteristics



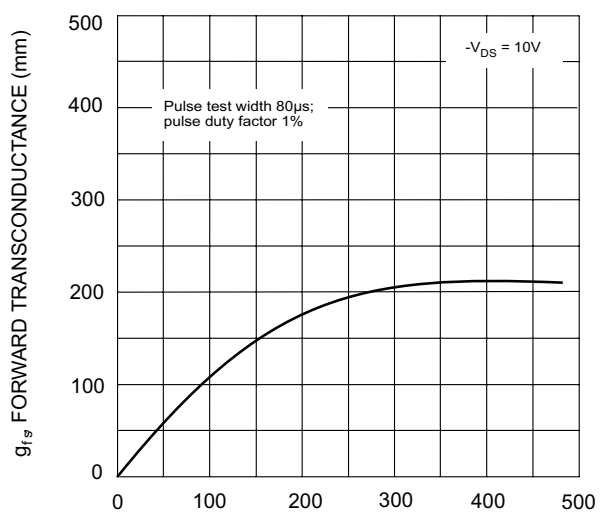
$-V_{DS}$, DRAIN-SOURCE VOLTAGE (V)
Fig. 3, Saturation Characteristics



$-V_{GS}$, DRAIN-SOURCE VOLTAGE (V)
Fig. 4, Drain Current vs Gate-Source Voltage



V_{GS} , GATE-SOURCE VOLTAGE (V)
Fig. 5, Transconductance vs Gate-Source Voltage



I_D , DRAIN CURRENT, (mA)
Fig. 6, Transconductance vs. Drain Current