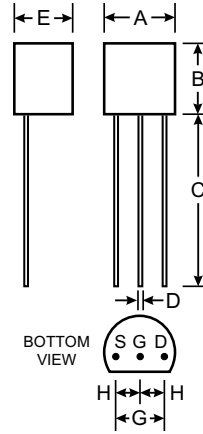


Features

- High Breakdown Voltage
- High Input Impedance
- Fast Switching Speed
- Specially Suited for Telephone Subsets

Mechanical Data

- Case: TO-92 Plastic
- Leads: Solderable per MIL-STD-202, Method 208
- Pin Connections: See Diagram
- Weight: 0.18 grams (approx.)



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}	200	V
Drain-Gate-Voltage	V_{DGS}	200	V
Gate-Source-Voltage (pulsed) (Note 2)	V_{GS}	± 20	V
Drain-Current (continuous)	I_D	120	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 to +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	0.5	A
Forward Voltage Drop (typical) @ $V_{GS} = 0, I_F = 0.5\text{A}, T_j = 25^\circ\text{C}$	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	$V_{(BR)DSS}$	200	230	—	V	$I_D = 100\mu\text{A}, V_{GS} = 0$
Gate-Body Leakage Current	I_{GSS}	—	—	10	nA	$V_{GS} = 15\text{V}, V_{DS} = 0$
Drain-Cutoff Current	I_{DSS} I_{DSX}	—	—	30 1.0	nA μA	$V_{DS} = 130\text{V}, V_{GS} = 0$ $V_{DS} = 70\text{V}, V_{GS} = 0.2\text{V}$
Gate-Source Threshold Voltage	$V_{GS(th)}$	—	1.8	3	V	$V_{GS} = V_{DS}, I_D = 1.0\text{mA}$
Drain-Source ON Resistance	$r_{DS(ON)}$	—	18	28	Ω	$V_{GS} = 2.8\text{V}, I_D = 20\text{mA}$
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	—	—	150	K/W	(Note 1)
Input Capacitance Output Capacitance Feedback Capacitance	C_{iss} C_{oss} C_{rss}	—	58 8.0 1.5	—	pF	$V_{DS} = 20\text{V}, V_{GS} = 0, f = 1.0\text{MHz}$
Turn On Time Turn Off Time	t_{on} t_{off}	—	5.0 15	—	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 2.0mm from case.
2. Pulse Test: Pulse width = 80 μs , duty factor = 1%.

