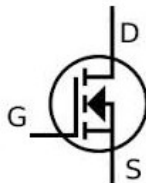
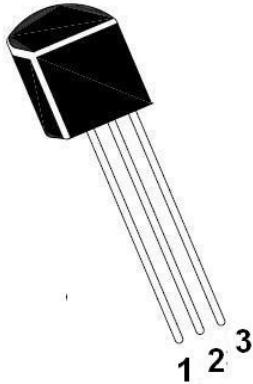


N-CHANNEL MOSFET



Pin Configuration

- 1 Drain
- 2 Gate
- 3 Source

BS170
TO-92
Plastic Package

FEATURES

- High Density Cell Design for Low $R_{DS(ON)}$
- Voltage Controlled Small Signal Switch
- Rugged and reliable
- High saturation current capability

MAXIMUM RATINGS ($T_a=25\text{ }^\circ\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	VALUE	UNIT
Drain-Source Voltage	V_{DSS}	60	V
Drain-Gate Voltage ($R_{GS} \leq 1M\Omega$)	V_{DGR}	60	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current – Continuous - Pulsed	I_D	500	mA
		1200	
Maximum Power Dissipation Derate Above 25 °C	P_D	830	mW
		6.6	mW/°C
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	°C
Maximum Lead Temperature for Soldering Purpose, 1/16” from Case for 10 Seconds	T_L	300	°C
Thermal Resistance, Junction- to-Ambient	$R_{\theta JA}$	150	°C/W



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ELECTRICAL CHARACTERISTICS ($T_a = 25\text{ }^\circ\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Drain -Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=100\mu A$	60			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=25V, V_{GS}=0V$			0.5	μA
Gate-body Leakage	I_{GSF}	$V_{GS}=15V, V_{DS}=0V$			10	nA
Gate-Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=1mA$	0.8	2.1	3	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=200mA$		1.2	5	Ω
Forward Trans conductance	g_{fs}	$V_{DS}=10V, I_D=200mA$		320		mS
Input Capacitance	C_{iss}			24	40	pF
Output Capacitance	C_{oss}	$V_{GS}=0V, V_{DS}=10V, f=1.0MHz$		17	30	
Reverse Transfer Capacitance	C_{rss}			7	10	
Turn-On Time	$t_{d(on)}$	$V_{DD}=25V, I_D=200mA$			10	ns
Turn-Off Time	$t_{d(off)}$	$V_{GS}=10V, R_{GEN}=25W$			10	



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Customer Notes

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

DISCLAIMER

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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