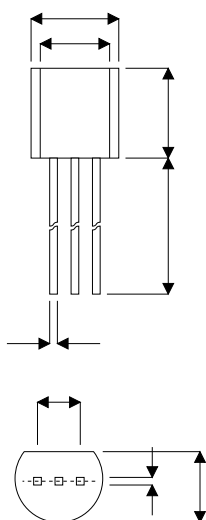


**MECHANICAL DATA**

Dimensions in mm (inches)



**TO92 PACKAGE**

PIN 1 – Drain      PIN 2 – Gate      PIN 3 – Drain

**N-CHANNEL  
ENHANCEMENT MODE  
MOS TRANSISTOR**

**FEATURES**

- $V_{(BR)DSS} = 60V$
- $R_{DS(ON)} = 5\Omega$
- $I_D = 1A$

**ABSOLUTE MAXIMUM RATINGS** ( $T_{CASE} = 25^{\circ}C$  unless otherwise stated)

$V_{DS}$	Drain – Source Voltage	60V
$V_{GS}$	Gate – Source Voltage	$\pm 40V$
$I_D$	Drain Current	200mA
$I_{DM}$	Pulsed Drain Current	500mA
$P_D$	Power Dissipation	400mW
	Derate above 25°C	3.2mW/°C
$T_j, T_{stg}$	Operating and Storage Temperature Range	-55 to 150°C
$T_L$	Maximum Lead Temperature for Soldering Purposes, 1/16 from case for 10 seconds	300°C

**ELECTRICAL CHARACTERISTICS** ( $T_{CASE} = 25^{\circ}C$  unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit		
<b>STATIC CHARACTERISTICS</b>							
$V_{(BR)DSS}$	Gate – Source Breakdown Voltage	$V_{GS} = 0V$	$I_D = 10\mu A$	60		V	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}$	$I_D = 1mA$	0.8	3.0		
$I_{GSS}$	Gate – Body Leakage Current Forward	$V_{GSF} = 15V$	$V_{DS} = 0V$		-10	nA	
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS} = 48V$	$V_{GS} = 0V$		1	$\mu A$	
			$T_J = 125^{\circ}C$		1	mA	
$I_{D(on)*}$	On–State Drain Current	$V_{GS} = 4.5$	$V_{DS} = 10V$	75		mA	
$R_{DS(on)*}$	Drain – Source On Resistance	$V_{GS} = 10V$	$I_D = 0.5A$	$T_{CASE} = 125^{\circ}C$		5	$\Omega$
						9	
$V_{DS(on)*}$	Drain – Source On Voltage	$V_{GS} = 10V$	$I_D = 0.5A$		2.5	V	
			$V_{GS} = 4.5V$	$I_D = 75mA$			0.4
$g_{FS*}$	Forward Transconductance	$V_{GS} = 10V$	$I_D = 200mA$	100		$\mu mhos$	
<b>DYNAMIC CHARACTERISTICS</b>							
$C_{iss}$	Input Capacitance	$V_{DS} = 25V$			60	pF	
$C_{oss}$	Output Capacitance	$V_{GS} = 0V$			25		
$C_{rss}$	Reverse Transfer Capacitance	$f = 1MHz$			5		
<b>SWITCHING CHARACTERISTICS</b>							
$t_{ON}$	Turn–On Time	$V_{DD} = 15V$	$R_L = 25\Omega$		10	ns	
$t_{OFF}$	Turn–Off Time	$R_G = 25\Omega$	$I_D = 600mA$		10		

\* Pulse Test:  $PW = 300 \mu s$ ,  $\delta \leq 2\%$

THERMAL CHARACTERISTIC		Min.	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient			312.5	$^{\circ}C/W$