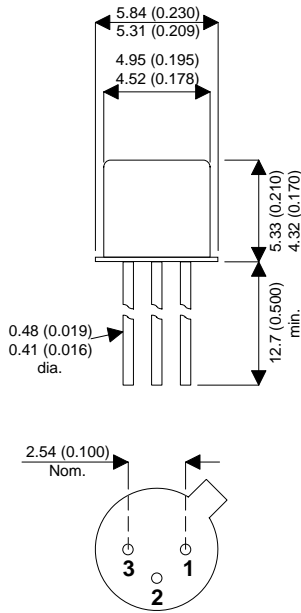


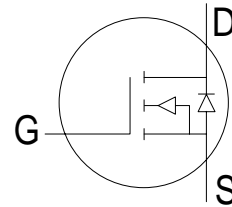
**MECHANICAL DATA**  
Dimensions in mm (inches)



**TO18 PACKAGE**  
**Underside View**

**PIN 1 - Source      PIN 2 - Gate      PIN 3 - Drain & Case**

**N-CHANNEL**  
**ENHANCEMENT MODE**  
**MOSFET**



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

$V_{DS}$	Drain – Source Voltage		60V
$V_{GS}$	Gate – Source Voltage		+15 , -0.3 V
$I_D$	Continuous Drain Current	@ $T_{amb} = 25^{\circ}\text{C}$	0.17A
		@ $T_{amb} = 100^{\circ}\text{C}$	0.11A
$I_{DM}$	Pulsed Drain Current <sup>1</sup>		1.0A
$P_D$	Power Dissipation	@ $T_{amb} = 25^{\circ}\text{C}$	1.5W
		@ $T_{amb} = 100^{\circ}\text{C}$	0.12W
$T_{STG} , T_J$	Maximum Junction and Storage Temperature Range		-55 to 150°C

NOTE:

1) Repetitive Rating: Pulse Width limited by maximum junction temperature.

**ELECTRICAL RATINGS** ( $T_{amb} = 25^{\circ}\text{C}$  unless otherwise stated)

Characteristic		Test Conditions		Min.	Typ.	Max.	Unit
<b>STATIC CHARACTERISTICS</b>							
$BV_{DSS}$	Drain – Source Breakdown Voltage	$V_{GS} = 0\text{V}$	$I_D = 100\mu\text{A}$	60	120		V
$V_{GS(TH)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}$	$I_D = 1\text{mA}$	0.8	1.4	2.5	
$I_{GSS}$	Gate – Source Leakage Current	$V_{DS} = 0\text{V}$	$V_{GS} = 15\text{V}$		1	100	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS} = 48\text{V}$	$V_{GS} = 0\text{V}$		0.7	10	$\mu\text{A}$
			$T_J = 125^{\circ}\text{C}$		3	500	
$I_{D(ON)}$	On State Drain Current <sup>1</sup>	$V_{DS} = 10\text{V}$	$V_{GS} = 10\text{V}$	750	1000		mA
$R_{DS(ON)}$	Static Drain – Source On-State Resistance <sup>1</sup>	$V_{GS} = 5\text{V}$	$I_D = 0.2\text{A}$		4	7.5	$\Omega$
			$I_D = 0.5\text{A}$		3	5	
			$T_J = 125^{\circ}\text{C}$		5.6	9	
$g_{fs}$	Forward Transconductance <sup>1</sup>	$V_{DS} = 10\text{V}$	$I_D = 0.5\text{A}$	100	300		mS
$g_{os}$	Common Source Output Conductance	$V_{DS} = 7.5\text{V}$	$I_D = 50\text{mA}$		200		$\mu\text{S}$
<b>DYNAMIC CHARACTERISTICS</b>							
$C_{iss}$	Input capacitance	$V_{GS} = 0\text{V}$			38	60	pF
$C_{oss}$	Output capacitance	$V_{DS} = 25\text{V}$			16	25	
$C_{rss}$	Reverse transfer capacitance	$f = 1\text{MHz}$			2	5	
<b>SWITCHING CHARACTERISTICS</b>							
$t_{on}$	Turn-on Time	$V_{DD} = 15\text{V}$	$R_L = 23\Omega$		7	10	ns
$t_{off}$	Turn-off Time	$I_D = 0.6\text{A}$	$R_G = 25\Omega$		9	10	
		$V_{GEN} = 10\text{V}$					

**NOTES:**

 1) Pulse Test: Pulse Width =  $300\mu\text{s}$  , Duty Cycle  $\leq 2\%$ 
**THERMAL CHARACTERISTICS**

Characteristic		Min.	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance Junction – Ambient when mounted on PCB			400	$^{\circ}\text{C/W}$