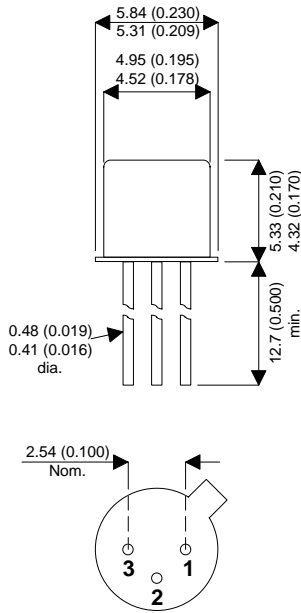


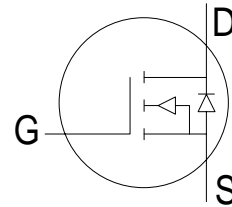
MECHANICAL DATA
Dimensions in mm (inches)



TO18 PACKAGE
Underside View

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

N-CHANNEL
ENHANCEMENT MODE
MOSFET



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

V_{DS}	Drain – Source Voltage		60V
V_{GS}	Gate – Source Voltage		+15 , –0.3 V
I_D	Continuous Drain Current	@ $T_{amb} = 25^{\circ}C$	0.17A
		@ $T_{amb} = 100^{\circ}C$	0.11A
I_{DM}	Pulsed Drain Current ¹		1.0A
P_D	Power Dissipation	@ $T_{amb} = 25^{\circ}C$	1.5W
		@ $T_{amb} = 100^{\circ}C$	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
STATIC CHARACTERISTICS							
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	μA
			$T_J = 125^{\circ}\text{C}$		3	500	
$I_{D(ON)}$	On State Drain Current ¹	$V_{DS} = 10\text{V}$	$V_{GS} = 10\text{V}$	750	1000		mA
$R_{DS(ON)}$	Static Drain – Source On-State Resistance ¹	$V_{GS} = 5\text{V}$	$I_D = 0.2\text{A}$		4	7.5	Ω
			$I_D = 0.5\text{A}$		3	5	
			$T_J = 125^{\circ}\text{C}$		5.6	9	
g_{fs}	Forward Transconductance ¹	$V_{DS} = 10\text{V}$	$I_D = 0.5\text{A}$	100	300		mS
g_{os}	Common Source Output Conductance	$V_{DS} = 7.5\text{V}$	$I_D = 50\text{mA}$		200		μS
DYNAMIC CHARACTERISTICS							
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	
SWITCHING CHARACTERISTICS							
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	$^{\circ}\text{C/W}$