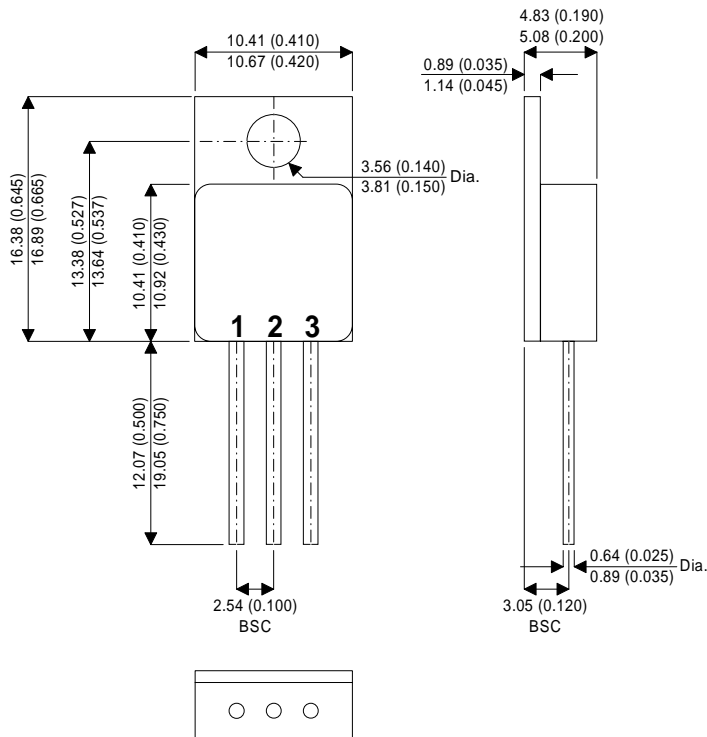


MECHANICAL DATA

Dimensions in mm (inches)



TO257AA – Metal Package

Pin 1 – Drain Pin 2 – Source Pin 3 – Gate

**N-CHANNEL
POWER MOSFET
FOR HI-REL
APPLICATIONS**

V_{DS} **100V**
 $I_{D(max)}$ **14A**
 $R_{DS(on)}$ **.055Ω**

FEATURES

- HERMETICALLY SEALED TO257 METAL PACKAGE
- SIMPLE DRIVE REQUIREMENTS
- LIGHTWEIGHT
- SCREENING OPTIONS AVAILABLE
- ALL LEADS ISOLATED FROM CASE

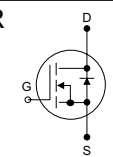
ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

V_{GS}	Gate – Source Voltage	$\pm 20V$
I_D	Continuous Drain Current ($V_{GS} = 0, T_{case} = 25^{\circ}C$)	34A
I_D	Continuous Drain Current ($V_{GS} = 0, T_{case} = 100^{\circ}C$)	21A
I_{DM}	Pulsed Drain Current ¹	136A
P_D	Power Dissipation @ $T_{case} = 25^{\circ}C$	100W
	Linear Derating Factor	0.8W/ $^{\circ}C$
T_J, T_{stg}	Operating and Storage Temperature Range	-55 to 150 $^{\circ}C$
T_L	Package Mounting Surface Temperature (for 5 sec)	300 $^{\circ}C$
$R_{\theta JC}$	Thermal Resistance Junction to Case	1.25 $^{\circ}C/W$ max.

Notes

1) Pulse Test: Pulse Width $\leq 300ms, \delta \leq 2\%$

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

STATIC ELECTRICAL RATINGS						
BV_{DSS}	Drain – Source Breakdown Voltage	$V_{GS} = 0$	$I_D = 250\mu\text{A}$	100		V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}$	$I_D = 250\mu\text{A}$	2.0	4.0	
I_{GSS}	Gate-Body Leakage Forward	$V_{GS} \leq 20\text{V}$			100	nA
I_{GSS}	Gate-Body Leakage Reverse	$V_{GS} = -20\text{V}$			-100	
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS} = \text{Max Rate}, V_{GS} = 0\text{V}$			0.1	0.25
		$V_{DS} = 0.8 \text{ Max Rate}, V_{GS} = 0\text{V}$ $T_C = 125^{\circ}\text{C}$			0.2	1.0
$V_{DS(on)}$	Static Drain – Source On-State Voltage ¹	$V_{GS} = 10\text{V}$	$I_D = 22\text{A}$		1.10	1.30
$R_{DS(on)}$	Static Drain – Source On-State Resistance ¹	$V_{GS} = 10\text{V}$	$I_D = 22\text{A}$			0.55
DYNAMIC CHARACTERISTICS						
G_{fs}	Forward Transconductance ¹	$V_{DS} = 25\text{V}$	$I_D = 22\text{A}$	14		S
C_{iss}	Input Capacitance	$V_{GS} = 0\text{V}$			1900	pF
C_{oss}	Output Capacitance	$V_{DS} = 25\text{V}$			450	
C_{riss}	Reverse Transfer Capacitance	$F = 1\text{MHz}$			230	
$t_{d(on)}$	Turn-On Delay Time				11	ns
t_r	Rise Time	$V_{DD} = 50\text{V}$	$I_D = 22\text{A}$		56	
$t_{d(off)}$	Turn-Off Delay Time	$R_G = 3.6\Omega$	$R_D = 2.9\Omega$		45	
t_f	Fall Time				40	
SOURCE – DRAIN DIODE CHARACTERISTICS						
I_S	Continuous Source Current (Body Diode)	Modified MOSPOWER symbol showing the integral P-N Junction rectifier 			34	A
I_{SM}	Source Current ¹ (Body Diode)				112	
V_{SD}	Diode Forward Voltage	$I_S = 22\text{A}, V_{GS} = 0\text{V}, T_C = 25^{\circ}\text{C}$			1.3	V
t_{rr}	Reverse Recovery Time	$T_J = 25^{\circ}\text{C}$	$I_F = 22\text{A}$		180	270
Q_{rr}	Reverse Recovery Charge	$di/dt = 100\text{A}/\mu\text{s}$			1.2	1.8

Notes

 1) Pulse Test: Pulse Width $\leq 300\text{ms}$, $\delta \leq 2\%$