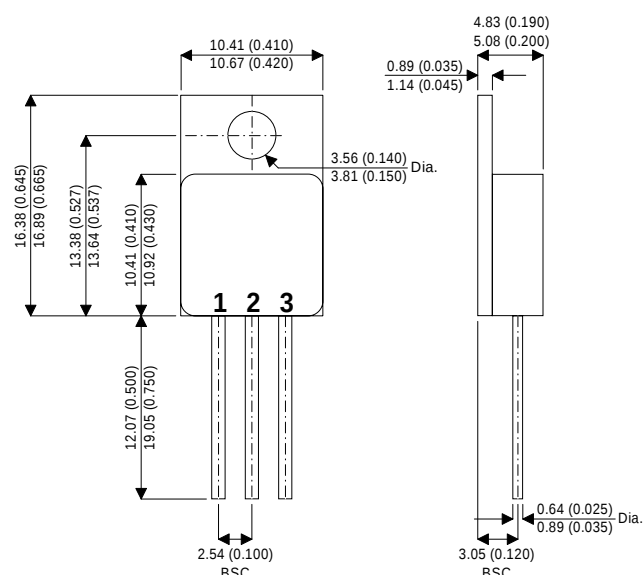


MECHANICAL DATA

Dimensions in mm(inches)



TO-257AB Metal Package

Pin 1 – Gate

Pin 2 – Drain

Pin 3 – Source

N-CHANNEL ENHANCEMENT MODE TRANSISTOR

$V_{(BR)DSS}$	200V
$I_{D(A)}$	14A
$R_{DS(on)}$	0.16Ω

FEATURES

- TO257AB HERMETIC PACKAGE FOR HIGH RELIABILITY APPLICATIONS
- SCREENING OPTIONS AVAILABLE
- SIMPLE DRIVE REQUIREMENTS

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

V_{DS}	Drain – Source Voltage	200V
V_{GS}	Gate – Source Voltage	±20V
I_D	Continuous Drain Current $T_C = 25^{\circ}C$	14A
	$T_C = 100^{\circ}C$	8.5A
I_{DM}	Pulsed Drain Current ¹	56A
P_D	Power Dissipation $T_C = 25^{\circ}C$	60W
	$T_C = 100^{\circ}C$	23W
T_J, T_{stg}	Operating and Storage Temperature Range	–55 to 150°C
T_L	Lead Temperature ($1/16$ " from case for 10 sec.)	300°C

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

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
STATIC ELECTRICAL RATINGS							
BV _{(BR)DSS}	Drain–Source Breakdown Voltage	V _{GS} = 0	I _D = 250μA	200			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS}	I _D = 250μA	2		4	V
I _{GSS}	Gate – Body Leakage	V _{DS} = 0	V _{GS} = ±20V			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 160V				25	μA
		V _{GS} = 0	T _J = 125°C			250	
I _{D(on)}	On–State Drain Current ¹	V _{DS} = 10V	V _{GS} = 10V	14			A
R _{DS(on)}	Static Drain – Source On–State Resistance ¹	V _{GS} = 10V			0.14	0.16	Ω
		I _D = 8.5A	T _J = 125°C		0.25	0.30	
g _{fs}	Forward Transconductance ¹	V _{DS} = 15V	I _{DS} = 8.5A	5.0			S
DYNAMIC CHARACTERISTICS							
C _{iss}	Input Capacitance	V _{GS} = 0			1550		pF
C _{oss}	Output Capacitance	V _{DS} = 25V			500		
C _{rss}	Reverse Transfer Capacitance	f = 1MHz			220		
Q _g	Total Gate Charge ²	V _{DS} = 0.5 x V _{(BR)DSS} V _{GS} = 10V I _D = 14A		30	44	77	nC
Q _{gs}	Gate Source Charge ²			4.6	10	15	
Q _{gd}	Gate Drain Charge ²			13	26	35	
t _{d(on)}	Turn–On Delay Time ²	V _{DD} = 100V I _D = 14A			10	30	ns
t _r	Rise Time ²	V _{GEN} =10V			60	100	
t _{d(off)}	Turn–Off Delay Time ²	R _L = 7.1Ω			30	80	
t _f	Fall Time ²	R _G = 4.7Ω			40	95	
SOURCE – DRAIN DIODE CHARACTERISTICS							
I _S	Continuous Current					114	A
I _{SM}	Pulse Current ³					56	
V _{SD}	Forward Voltage	I _F = I _S	V _{GS} = 0			2.0	V
t _{rr}	Reverse Recovery Time	I _F = I _S			150	650	ns
Q _{rr}	Reverse Recovery Charge	dI _F /dt = 100A/μs			0.5		μC

¹Pulse test : Pulse Width < 300 μs ,Duty Cycle < 2%

²Independent of Operating Temperature

³Pulse width Limited by maximum Junction Temperature

THERMAL RESISTANCE CHARACTERISTICS

Parameter	Min.	Typ.	Max.	Unit
R_{thJC} Thermal resistance Junction-Case			2.1	
R_{thJA} Thermal resistance Junction-ambient			80	K/W
R_{thCS} Thermal resistance Junction-ambient		1.0		