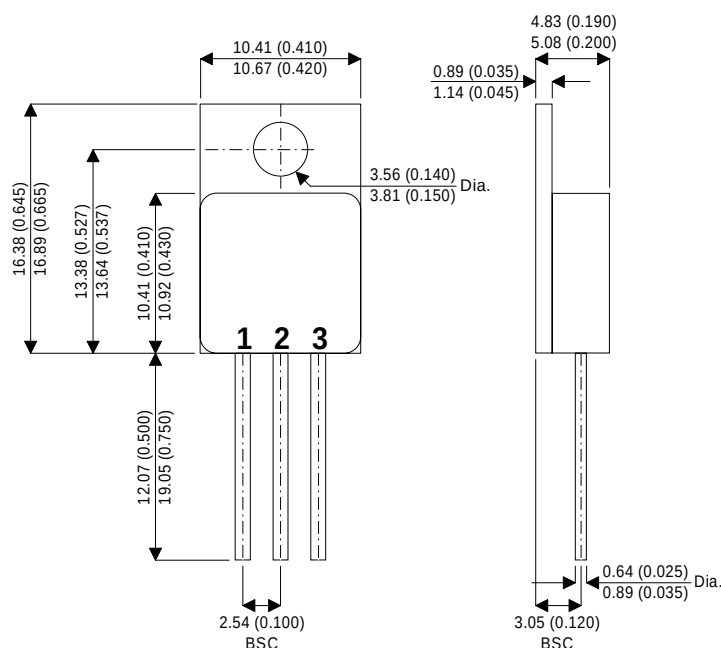


MECHANICAL DATA

Dimensions in mm(inches)



N-CHANNEL POWER MOSFET

V_{DSS}	100V
I_{D(cont)}	11A
R_{DS(on)}	0.15Ω

FEATURES

- TO-220 ISOLATED HERMETIC PACKAGE
- LOW $R_{DS(ON)}$
- SIMPLE DRIVE REQUIREMENTS

TO-220 Metal Package

Pin 1 – Gate

Pin 2 – Drain

Pin 3 – Source

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

V _{DS}	Drain – Source Voltage	100V
V _{GS}	Gate – Source Voltage	±20V
I _D	Continuous Drain Current	T _C = 25°C
		T _C = 100°C
		11A
		7.7A
I _{DM}	Pulsed Drain Current ¹	48A
P _D	Power Dissipation	T _C = 25°C
		T _C = 100°C
		45W
		18W
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 _{DSS}	Drain – Source Breakdown Voltage	V _{GS} = 0	I _D = 250μA	100			V
	Gate Threshold Voltage	V _{DS} = V _{GS}	I _D = 250μA	2		4	V
V _{GS(th)}	Gate – Body Leakage	V _{DS} = 0	V _{GS} = ±20V			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 80V				25	μA
		V _{GS} = 0	T _J = 125°C			250	
I _{D(on)}	On–State Drain Current	V _{DS} = 10V	V _{GS} = 10V	11			A
R _{DS(on)}	Static Drain – Source On–State Resistance	V _{GS} = 10V			0.12	0.15	Ω
		I _D = 7.7A	T _J = 125°C		0.22	0.27	
g _{fs}	Forward Transconductance	V _{DS} = 15V	I _{DS} = 7.7A	4	5		S
DYNAMIC CHARACTERISTICS							
C _{iss}	Input Capacitance	V _{GS} = 0		600			pF
C _{oss}	Output Capacitance	V _{DS} = 25V		190			
C _{rss}	Reverse Transfer Capacitance	f = 1MHz		35			
t _{d(on)}	Turn–On Delay Time	V _{DD} = 50V	I _D = 11A	7			ns
t _r	Rise Time	V _{GEN} =10V		45			
t _{d(off)}	Turn–Off Delay Time	R _L = 4.1Ω		30			
t _f	Fall Time	R _G = 7.5Ω		10			
SOURCE – DRAIN DIODE CHARACTERISTICS							
I _S	Continuous Source Current					12	A
I _{SM}	Pulse Source Current ²					48	
V _{SD}	Diode Forward Voltage	I _F =11	V _{GS} = 0			2.5	V
t _{rr}	Reverse Recovery Time	I _F = I _S		100		300	ns
Q _{rr}	Reverse Recovery Charge	dI _F /dt = 100A/μs		0.7			μC
PACKAGE CHARACTERISTICS							
R _{θJC}	Thermal Resistance Junction – Case					2.8	K/W
R _{θJA}	Thermal Resistance Junction – Ambient					80	
R _{θCS}	Thermal Resistance Case – Sink				1		