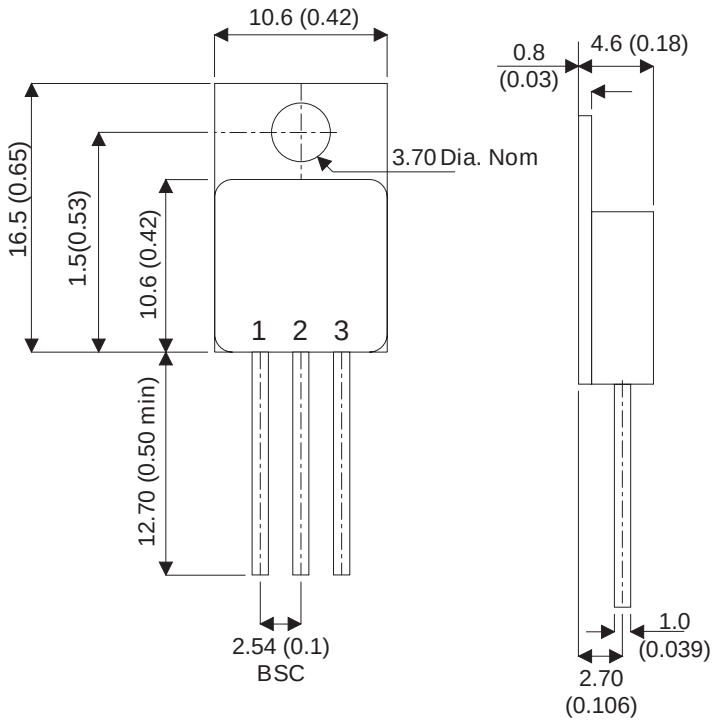
BUZ50A–220M
BUZ50B–220M

MECHANICAL DATA
Dimensions in mm



TO220M (TO-257AB)- Isolated Metal Package

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

MOS POWER N-CHANNEL ENHANCEMENT MODE TRANSISTORS

FEATURES

- **HERMETIC TO220 ISOLATED METAL PACKAGE**
- **CECC SCREENING OPTIONS**
- **JAN LEVEL SCREENING OPTIONS**

APPLICATIONS:

Hermetically sealed version for high reliability power linear and switching applications

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)		**BUZ50A**	**BUZ50B**
V_{DS}	Drain – Source Voltage	1000V	1000V
V_{GS}	Gate – Source Voltage	±20V	±20V
I_D	Continious Drain Current	1.0A	1.5A
I_{DM}	Maximum Pulsed Drain Current	4.0A	4.5A
P_D	Total Power Dissipation at $T_{case} \leq 25°C$	75W	
T_{stg}	Storage Temperature Range	–65°C To 200°C	
T_j	Operating Junction Temperature Range	200°C	

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Document Number 5541
Issue 1

BUZ50A–220M
BUZ50B–220M

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
BV_{DSS}	Drain – Source Breakdown Voltage	V_{GS} = 0	I_D = 5.0mA	1000			V
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS} = 1000V	V_{GS} = 0V			0.25	mA
			T_J = 100°C			2.5	
I_{GSS}	Gate – Body Leakage Current	V_{GS} = 20V	V_{DS} = 0			500	nA
$V_{GS(th)}$*	Gate Threshold Voltage	V_{DS} = V_{GS}	I_D = 1.0mA	2.0		4.5	V
			T_J = 100°C	1.5		4.0	
$V_{DS(on)}$*	Drain Source On Voltage	V_{GS} = 10V	I_D = 0.5A			5.0	
			T_J = 100°C			10	
		V_{GS} = 10V	I_D = 1.0A			12	
g_{fs}*	Forward Transconductance	V_{DS} = 15V	I_D = 0.5A			0.5	S
$R_{DS(on)}$*	Drain – Source On–State Resistance*	V_{GS} = 10V	I_D = 0.5A			10	Ω
C_{iss}	Input Capacitance	V_{GS} = 0				1200	pF
C_{oss}	Output Capacitance	V_{DS} = 25V				300	
C_{rss}	Reverse Transfer Capacitance	f = 1MHz				80	
$t_{d(on)}$*	Turn–On Delay Time	T_J = 100°C				50	ns
t_r*	Rise Time	I_D = 0.5A				150	
$t_{d(off)}$*	Turn–Off Delay Time	V_{DS} = 125V				200	
t_f*	Fall Time	R_{gen} = 50Ω				100	
	SOURCE – DRAIN DIODE CHARACTERISTICS						
V_{SD}*	Diode Forward Voltage	I_S = 1.0A				1.0	V
t_{on}	Forward Turn On Time	V_{GS} = 0V				250	ns
t_{rr}	Reverse Recovery Time					420	

NOTE: *Pulsed : Pulse duration = 300 μs , duty cycle ≤ 2%

THERMAL DATA

$R_{\theta JC}$	Thermal Resistance Junction – Case			1.67	°C/W
$R_{\theta JA}$	Thermal Resistance Junction – Ambient			75	

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