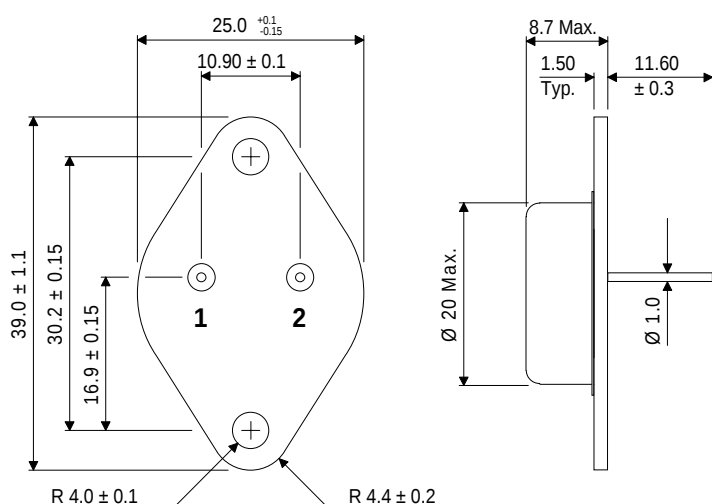


MECHANICAL DATA

Dimensions in mm

N-CHANNEL POWER MOSFET

POWER MOSFETS FOR AUDIO APPLICATIONS



TO-3

Pin 1 – Gate

Pin 2 – Drain

Case – Source

FEATURES

- HIGH SPEED SWITCHING
- N-CHANNEL POWER MOSFET
- SEMEFAB DESIGNED AND DIFFUSED
- HIGH VOLTAGE (160V & 200V)
- HIGH ENERGY RATING
- ENHANCEMENT MODE
- INTEGRAL PROTECTION DIODE
- P-CHANNEL ALSO AVAILABLE AS BUZ905 & BUZ906

ABSOLUTE MAXIMUM RATINGS

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

		BUZ900	BUZ901
V_{DSX}	Drain – Source Voltage	160V	200V
V_{GSS}	Gate – Source Voltage	$\pm 14V$	
I_D	Continuous Drain Current	8A	
$I_{D(PK)}$	Body Drain Diode	8A	
P_D	Total Power Dissipation @ $T_{case} = 25^{\circ}C$	125W	
T_{stg}	Storage Temperature Range	-55 to $150^{\circ}C$	
T_j	Maximum Operating Junction Temperature	$150^{\circ}C$	
$R_{\theta JC}$	Thermal Resistance Junction – Case	$1^{\circ}C/W$	

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

Characteristic	Test Conditions		Min.	Typ.	Max.	Unit
BV_{DSX} Drain – Source Breakdown Voltage	$V_{\text{GS}} = -10\text{V}$ $I_{\text{D}} = 10\text{mA}$	BUZ900	160			V
		BUZ901	200			
BV_{GSS} Gate – Source Breakdown Voltage	$V_{\text{DS}} = 0$	$I_{\text{G}} = \pm 100\mu\text{A}$	± 14			V
$V_{\text{GS(OFF)}}$ Gate – Source Cut-Off Voltage	$V_{\text{DS}} = 10\text{V}$	$I_{\text{D}} = 100\text{mA}$	0.15		1.5	V
$V_{\text{DS(SAT)}}$ * Drain – Source Saturation Voltage	$V_{\text{GD}} = 0$	$I_{\text{D}} = 8\text{A}$			12	V
I_{DSX} Drain – Source Cut-Off Current	$V_{\text{GS}} = -10\text{V}$	$V_{\text{DS}} = 160\text{V}$ BUZ900			10	mA
		$V_{\text{DS}} = 200\text{V}$ BUZ901			10	
y_{fs} * Forward Transfer Admittance	$V_{\text{DS}} = 10\text{V}$	$I_{\text{D}} = 3\text{A}$	0.7		2	S

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

Characteristic	Test Conditions	Min.	Typ.	Max.	Unit
C_{iSS} Input Capacitance	$V_{\text{DS}} = 10\text{V}$ $f = 1\text{MHz}$		500		pF
C_{OSS} Output Capacitance			300		
C_{RSS} Reverse Transfer Capacitance			10		
t_{on} Turn-on Time	$V_{\text{DS}} = 20\text{V}$ $I_{\text{D}} = 5\text{A}$		100		ns
t_{off} Turn-off Time			50		

* Pulse Test: Pulse Width = $300\mu\text{s}$, Duty Cycle $\leq 2\%$.

