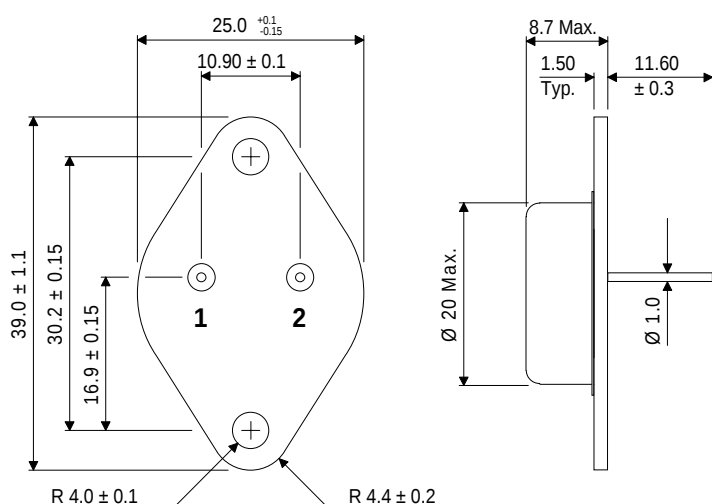


MECHANICAL DATA

Dimensions in mm

P-CHANNEL POWER MOSFET

POWER MOSFETS FOR AUDIO APPLICATIONS



TO-3

Pin 1 – Gate

Pin 2 – Drain

Case – Source

FEATURES

- HIGH SPEED SWITCHING
- P-CHANNEL POWER MOSFET
- SEMEFAB DESIGNED AND DIFFUSED
- HIGH VOLTAGE (160V & 200V)
- HIGH ENERGY RATING
- ENHANCEMENT MODE
- INTEGRAL PROTECTION DIODE
- N-CHANNEL ALSO AVAILABLE AS BUZ900 & BUZ901

ABSOLUTE MAXIMUM RATINGS

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

		BUZ905	BUZ906
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	$1.0^{\circ}C/W$	

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	$V_{\text{GS}} = 10\text{V}$ $I_{\text{D}} = -10\text{mA}$	BUZ905	-160			V
		BUZ906	-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	$V_{\text{GS}} = -10\text{V}$	$V_{\text{DS}} = -160\text{V}$ BUZ905			-10	mA
		$V_{\text{DS}} = -200\text{V}$ BUZ906			-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	$V_{\text{DS}} = -10\text{V}$ $f = 1\text{MHz}$		734		pF
C_{oSS} Output Capacitance			300		
C_{rSS} Reverse Transfer Capacitance			26		
t_{on} Turn-on Time	$V_{\text{DS}} = -20\text{V}$ $I_{\text{D}} = -5\text{A}$		120		ns
t_{off} Turn-off Time			60		

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

