

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

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Drain-Source Breakdown Voltage ($V_{GS} = 0$, $I_D = 10\ \mu\text{A}$)	$V_{(BR)DS}$	200	-	-	Vdc
Zero Gate Voltage Drain Current ($V_{DSS} = 130\ \text{Vdc}$, $V_{GS} = 0$)	I_{DSS}	-	-	30	nAdc
Gate-Body Leakage Current ($V_{GS} = 15\ \text{Vdc}$, $V_{DS} = 0$)	I_{GSSF}	-	-	10	nAdc
ON CHARACTERISTICS (Note 3)					
Gate Threshold Voltage ($I_D = 1.0\ \text{mA}$, $V_{DS} = V_{GS}$)	$V_{GS(th)}$	0.5	-	1.5	Vdc
Static Drain-to-Source On-Resistance ($V_{GS} = 2.0\ \text{Vdc}$, $I_D = 50\ \text{mA}$) ($V_{GS} = 2.8\ \text{Vdc}$, $I_D = 100\ \text{mA}$)	$r_{DS(on)}$	- -	- -	10 8.0	Ω
Drain Cutoff Current ($V_{GS} = 0.2\ \text{V}$, $V_{DS} = 70\ \text{V}$)	I_{DSX}	-	-	25	μA
Forward Transconductance ($I_D = 120\ \text{mA}$, $V_{DS} = 20\ \text{V}$)	g_{FS}	-	0.33	-	Mhos
DYNAMIC CHARACTERISTICS					
Input Capacitance ($V_{DS} = 25\ \text{V}$, $V_{GS} = 0$, $f = 1.0\ \text{MHz}$)	C_{iss}	-	-	150	pF
Output Capacitance ($V_{DS} = 25\ \text{V}$, $V_{GS} = 0$, $f = 1.0\ \text{MHz}$)	C_{oss}	-	-	30	pF
Reverse Transfer Capacitance ($V_{DS} = 25\ \text{V}$, $V_{GS} = 0$, $f = 1.0\ \text{MHz}$)	C_{rss}	-	-	10	pF
SWITCHING CHARACTERISTICS					
Turn-On Time (See Figure 1)	$t_{d(on)}$	-	-	15	ns
Turn-Off Time (See Figure 1)	$t_{d(off)}$	-	-	15	ns

3. Pulse Test: Pulse Width $\leq 300\ \mu\text{s}$, Duty Cycle = 2.0%.

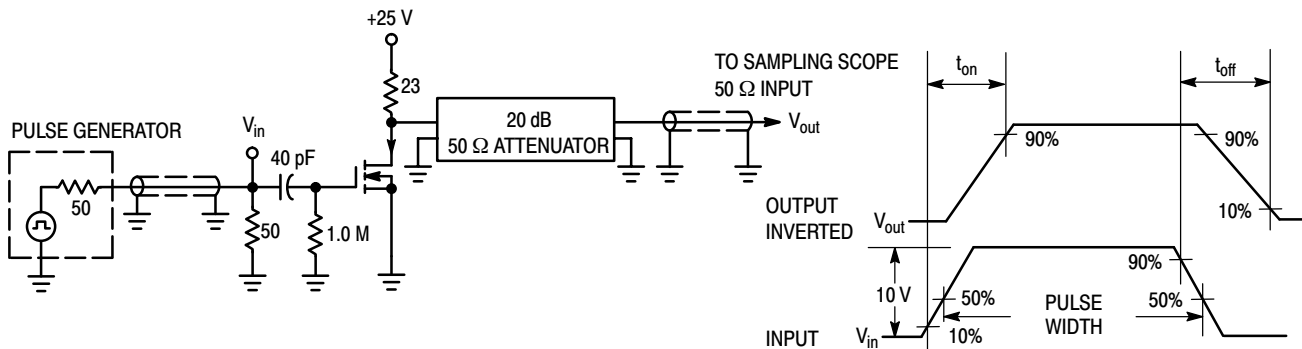
RESISTIVE SWITCHING

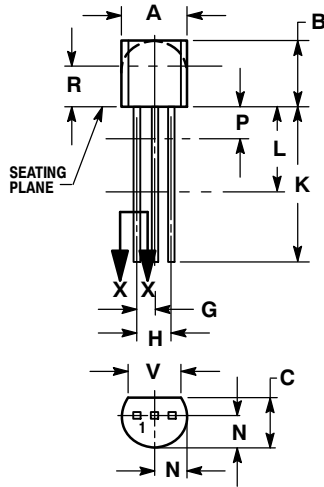
Figure 1. Switching Test Circuit

Figure 2. Switching Waveforms

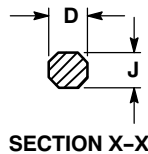
BS108

PACKAGE DIMENSIONS

TO-92 (TO-226)
CASE 29-11
ISSUE AM



STRAIGHT LEAD
BULK PACK




NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
4. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.175	0.205	4.45	5.20
B	0.170	0.210	4.32	5.33
C	0.125	0.165	3.18	4.19
D	0.016	0.021	0.407	0.533
E	0.045	0.055	1.15	1.39
F	0.095	0.105	2.42	2.66
G	0.015	0.020	0.39	0.50
H	0.500	---	12.70	---
I	0.250	---	6.35	---
J	0.080	0.105	2.04	2.66
K	---	0.100	---	2.54
L	0.115	---	2.93	---
M	0.135	---	3.43	---

STYLE 30:

1. DRAIN
2. GATE
3. SOURCE

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