

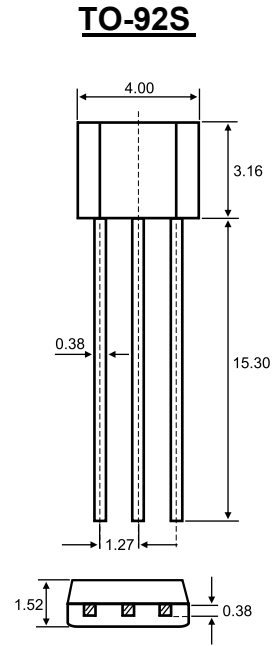
1. EMITTER
2. COLLECTOR
3. BASE

## Features

- ✧ High  $f_T$  and small  $C_{re}$  ( $f_T=320\text{MHz typ}$ ,  $C_{re}=0.95\text{pF typ}$ ).

### MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	30	V
$V_{CEO}$	Collector-Emitter Voltage	20	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current –Continuous	30	mA
$P_C$	Collector Power Dissipation	400	mW
$T_J$	Junction Temperature	125	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55-125	$^\circ\text{C}$



Dimensions in inches and (millimeters)

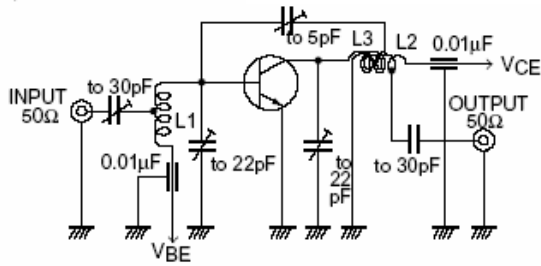
### ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$ , $I_E=0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$ , $I_B=0$	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$ , $I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=10\text{V}$ , $I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4\text{V}$ , $I_C=0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE}=6\text{V}$ , $I_C=1\text{mA}$	60		320	
Transition frequency	$f_T$	$V_{CE}=6\text{V}$ , $I_C=1\text{mA}$	200	320		MHz
Reverse Transfer Capacitance	$C_{re}$	$V_{CB}=6\text{V}$ , $f=1\text{MHz}$	0.7	0.95	1.3	pF
Base-to-Collector Time Constant	$r_{bb}'c_C$	$V_{CE}=6\text{V}$ , $I_C=1\text{mA}$ , $f=31.9\text{MHz}$		12	20	ps
Noise figure	NF	$V_{CE}=6\text{V}$ , $I_C=1\text{mA}$ , $f=100\text{MHz}$		3.0		dB
Power Gain	$P_G$	$V_{CE}=6\text{V}$ , $I_C=1\text{mA}$ , $f=100\text{MHz}$		25		dB

### CLASSIFICATION OF $h_{FE}$

Rank	D	E	F
Range	60-120	100-200	160-320

## NF, PG Test Circuit



L1 : 1mmø plated wire, 10mmø 5T tap, 2T from V<sub>BE</sub> side.

L2 : 1mmø plated wire, 10mmø 7T tap, 1T from V<sub>CE</sub> side.

L3 : 1mmø enameled wire, 10mmø 3T .

