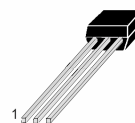


**APPLICATIONS**

Switching Circuit, Interface Circuit.

ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$) T_{stg} —Storage Temperature..... $-55\sim 150^{\circ}\text{C}$ T_j —Junction Temperature..... 150°C P_C —Collector Dissipation..... 300mW V_{CBO} —Collector-Base Voltage..... 50V V_{CEO} —Collector-Emitter Voltage..... 50V V_{EBO} —Emitter-Base Voltage..... 5V I_C —Collector Current..... 100mA

TO-92S



1—Emitter, E

2—Collector, C

3—Base, B

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV_{CBO}	Collector-Base Breakdown Voltage	50			V	$I_C=10\mu\text{A}$, $I_E=0$
BV_{CEO}	Collector-Emitter Breakdown Voltage	50			V	$I_C=0.1\text{mA}$, $I_B=0$
I_{CBO}	Collector Cut-off Current			0.1	μA	$V_{\text{CB}}=40\text{V}$, $I_E=0$
I_{CEO}	Collector Cut-off Current			0.5	μA	$V_{\text{CE}}=40\text{V}$, $I_B=0$
I_{EBO}	Emitter Cut-off Current	200	340	420	μA	$V_{\text{EB}}=5\text{V}$, $I_C=0$
H_{FE}	DC Current Gain	30				$V_{\text{CE}}=5\text{V}$, $I_C=1\text{mA}$
$V_{\text{CE(sat)}}$	Collector- Emitter Saturation Voltage		0.1	0.3	V	$I_C=10\text{mA}$, $I_B=0.5\text{mA}$
V_i (off)	Input Off Voltage	0.3			V	$V_{\text{CE}}=5\text{V}$, $I_C=0.1\text{mA}$
V_i (on)	Input On Voltage			2.5	V	$V_{\text{CE}}=0.3\text{V}$, $I_C=20\text{mA}$
R1	Input Resistor	3.2	4.7	6.2	Kohm	
R1/R2	Resistance Ratio	0.42	0.47	0.52		
fr	Current Gain-Bandwidth Product		250		MHz	$V_{\text{CE}}=10\text{V}$, $I_C=5\text{mA}$