

NPN General Purpose Amplifier

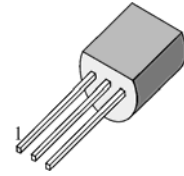
FEATURES & USE

High Collector Breakdown Voltage; Low Noise;

Complementary to 2N5401

This device is designed as a general purpose amplifier and switch for applications requiring high voltages.

TO - 92



1. Emitter 2. Base 3. Collector

Absolute Maximum Ratings $T_a = 25^{\circ}\text{C}$

Symbol	Parameter	Ratings	Units
V_{CB0}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	5	V
I_c	Collector Current	600	mA
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	-55 - 150	$^{\circ}\text{C}$

Electrical Characteristics $T_a = 25^{\circ}\text{C}$

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CB0}	Collector-Base Breakdown Voltage	$I_c=100\ \mu\text{A}$, $I_E=0$	180			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_c=1\text{mA}$, $I_B=0$	160			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=100\ \mu\text{A}$, $I_c=0$	5			V
I_{CBO}	Collector Cut-off Current	$V_{CB}=120\text{V}$, $I_E=0$			200	nA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=4\text{V}$, $I_c=0$			200	nA
h_{FE}	DC Current Gain	$V_{CE}=5\text{V}$, $I_c=10\text{mA}$	80		300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_c=50\text{mA}$, $I_B=5\text{mA}$			0.25	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_c=50\text{mA}$, $I_B=5\text{mA}$			1.0	V

h_{FE} Classification

Classification	A	B1	B2	C1	C2	C3
h_{FE}	50-100	100-150	150-200	200-230	230-250	250-300