

2N3702

PNP General Purpose Amplifier

- This device designed for use as general purpose amplifier and switches requiring collector currents to 300mA.
- · Sourced from Process 68.
- See PN200 for Characteristics.



1. Emitter 2. Collector 3. Base

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings* T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units	
V _{CEO}	Collector-Emitter Voltage	-25	V	
V _{CBO}	Collector-Base Voltage	-40	V	
V _{EBO}	Emitter-Base Voltage	-5.0	V	
I _C	Collector Current - Continuous	-500	mA	
T _J , T _{ST}	Operating and Storage Junction Temperature Range	-55 ~ +150	°C	

^{*} These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
Off Characteristics						
BV _{(BR)CEO}	Collector-Emitter Breakdown Voltage	$I_C = -10 \text{mA}, I_B = 0$	-25			V
BV _{(BR)CBO}	Collector-Base Breakdown Voltage	$I_C = -100\mu A, I_E = 0$	-40			V
BV _{(BR)EBO}	Emitter-Base Breakdown Voltage	$I_E = -100\mu A, I_C = 0$	-5.0			V
I _{CBO}	Collector Cut-off Current	$V_{CB} = -20V, I_{E} = 0$			-100	nA
I _{EBO}	Emitter Cut-off Current	$V_{EB} = -3.0V, I_{C} = 0$			-100	nA
On Characteristics *						
h _{FE}	DC Current Gain	$V_{CE} = -5.0V, I_{C} = -50mA$	60		300	
V _{CE} (sat)	Collector-Emitter Saturation Voltage	$I_C = -50 \text{mA}, I_B = -5.0 \text{mA}$			-0.25	V
V _{BE} (sat)	Base-Emitter Saturation Voltage	$V_{CE} = -5.0V, I_{C} = -50mA$	-0.6		-1.0	V
Small Signal Characteristics						
C _{ob}	Current Gain Bandwidth Product	V _{CB} = -10V, f = 1.0MHz			12	pF
f _T	Output Capacitance	$I_E = -50 \text{mA}, V_{CE} = -5.0 \text{V}$	100			MHz
Pulsa Tast: Pulsa < 300us Duty Cycle < 2.0%						

Pulse Test: Pulse $\leq 300 \mu s$, Duty Cycle $\leq 2.0\%$

Thermal Characteristics T_A=25°C unless otherwise noted

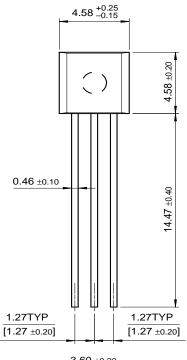
Symbol	Parameter	Max.	Units
P _D	Total Device Dissipation	625	mW
	Derate above 25°C	5.0	mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	83.3	°C/W
R _{0JA} Thermal Resistance, Junction to Ambient		200	°C/W

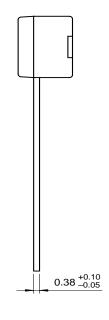
Rev. B, July 2002

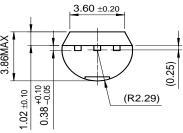
These ratings are based on a maximum junction temperature of 150 degrees C.
 These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Package Dimensions

TO-92







Dimensions in Millimeters

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CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
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