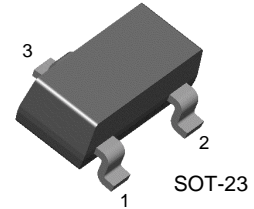


General Purpose Transistor



1. Base 2. Emitter 3. Collector

NPN Epitaxial TY Transistor

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

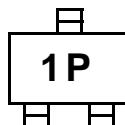
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	75	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	600	mA
P_C	Collector Power Dissipation	350	mW
T_{STG}	Storage Temperature	150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C=10\mu\text{A}, I_E=0$	75		V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}, I_B=0$	40		V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=10\mu\text{A}, I_C=0$	6		V
I_{CBO}	Collector Cut-off Current	$V_{CB}=60\text{V}, I_E=0$		0.01	μA
h_{FE}	* DC Current Gain	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$ $V_{CE}=10\text{V}, I_C=1\text{mA}$ $V_{CE}=10\text{V}, I_C=10\text{mA}$ $V_{CE}=10\text{V}, I_C=150\text{mA}$ $V_{CE}=10\text{V}, I_C=500\text{mA}$	35 50 75 100 40	300	
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C=150\text{mA}, I_B=15\text{mA}$ $I_C=500\text{mA}, I_B=50\text{mA}$		0.3 1.0	V V
$V_{BE(sat)}$	* Base-Emitter Saturation Voltage	$I_C=150\text{mA}, I_B=15\text{mA}$ $I_C=500\text{mA}, I_B=50\text{mA}$	0.6	1.2 2.0	V V
f_T	Current Gain Bandwidth Product	$I_C=20\text{mA}, V_{CE}=20\text{V}, f=100\text{MHz}$	300		MHz
C_{ob}	Output Capacitance	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		8	pF
NF	Noise Figure	$I_C=100\mu\text{A}, V_{CE}=10\text{V}$ $R_S=1\text{K}\Omega, f=1\text{MHz}$		4	dB
t_{ON}	Turn On Time	$V_{CC}=30\text{V}, I_C=150\text{mA}$ $V_{BE}=0.5\text{V}, I_{B1}=15\text{mA}$		35	ns
t_{OFF}	Turn Off Time	$V_{CC}=30\text{V}, I_C=150\text{mA}$ $I_{B1}=I_{B2}=15\text{mA}$		285	ns

* Pulse Test: $PW \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

Marking



Package Dimensions

SOT-23

