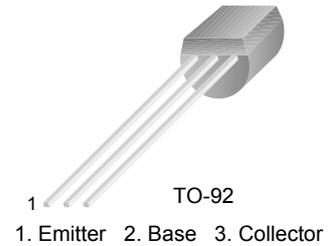


2N6520

PNP Epitaxial Silicon Transistor

Features

- High Voltage Transistor
- Collector-Emitter Voltage: $V_{CE0} = -350V$
- Collector Dissipation: $P_C (max) = 625mW$
- Complement to 2N6517



Absolute Maximum Ratings* $T_A = 25^\circ C$ unless otherwise noted

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-350	V
V_{CEO}	Collector-Emitter Voltage	-350	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-500	mA
I_B	Base Current	-250	mA
P_C	Collector Power Dissipation	0.625	W
	Derate above $25^\circ C$	5	mW/ $^\circ C$
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	-55 to +150	$^\circ C$

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

Symbol	Parameter	Test Conditions	Min.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = -100\mu\text{A}, I_E = 0$	-350		V
BV_{CEO}	* Collector-Emitter Breakdown Voltage	$I_C = -1\text{mA}, I_B = 0$	-350		V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = -10\mu\text{A}, I_C = 0$	-5		V
I_{CBO}	Collector Cut-off Current	$V_{CB} = -250\text{V}, I_E = 0$		-50	nA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = -4\text{V}, I_C = 0$		-50	nA
h_{FE}	* DC Current Gain	$V_{CE} = -10\text{V}, I_C = -1\text{mA}$ $V_{CE} = -10\text{V}, I_C = -10\text{mA}$ $V_{CE} = -10\text{V}, I_C = -30\text{mA}$ $V_{CE} = -10\text{V}, I_C = -50\text{mA}$ $V_{CE} = -10\text{V}, I_C = -100\text{mA}$	20 30 30 20 15	200 200	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -10\text{mA}, I_B = -1\text{mA}$ $I_C = -20\text{mA}, I_B = -2\text{mA}$ $I_C = -30\text{mA}, I_B = -3\text{mA}$ $I_C = -50\text{mA}, I_B = -5\text{mA}$		-0.30 -0.35 -0.50 -1	V V V V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -10\text{mA}, I_B = -1\text{mA}$ $I_C = -20\text{mA}, I_B = -2\text{mA}$ $I_C = -30\text{mA}, I_B = -3\text{mA}$		-0.75 -0.85 -0.90	V V V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE} = -10\text{V}, I_C = -100\text{mA}$		-2	V
f_T	* Current Gain Bandwidth Product	$V_{CE} = -20\text{V}, I_C = -10\text{mA}, f = 20\text{MHz}$	40	200	MHz
C_{ob}	Output Capacitance	$V_{CB} = -20\text{V}, I_E = 0, f = 1\text{MHz}$		6	pF
C_{EB}	Emitter-Base Capacitance	$V_{EB} = -0.5\text{V}, I_C = 0, f = 1\text{MHz}$		100	pF
t_{ON}	Turn On Time	$V_{BE(off)} = -2\text{V}, V_{CC} = -100\text{V}$ $I_C = -50\text{mA}, I_{B1} = -10\text{mA}$		200	ns
t_{OFF}	Turn Off Time	$V_{CC} = -100\text{V}, I_C = -50\text{mA}$ $I_{B1} = I_{B2} = -10\text{mA}$		3.5	ns

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

Typical Performance Characteristics

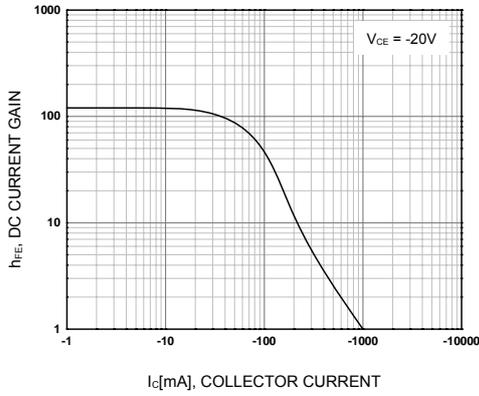


Figure 1. DC current Gain

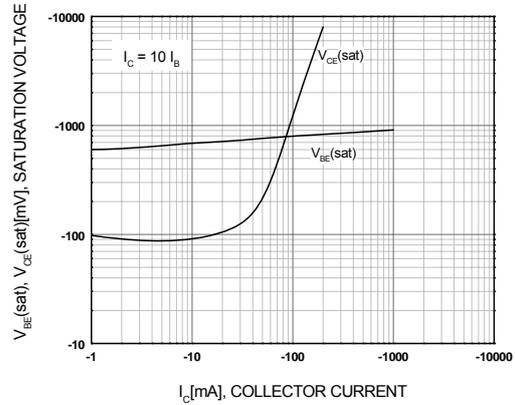


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

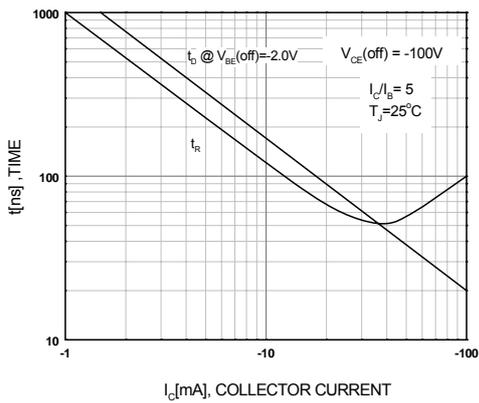


Figure 3. Turn-On Time

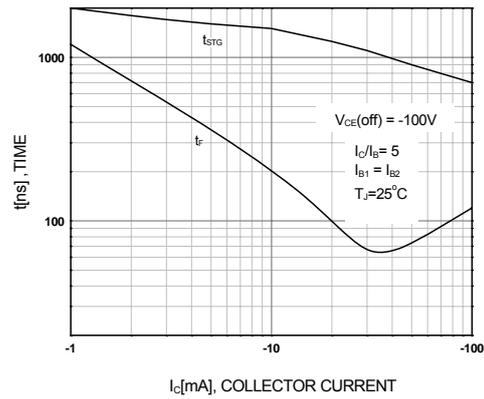


Figure 4. Turn-Off Time

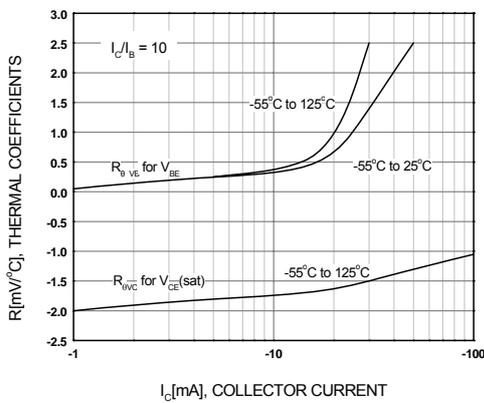


Figure 5. Temperature Coefficients

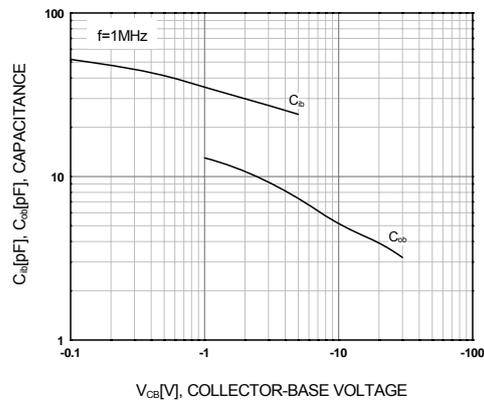


Figure 6. Capacitance

Typical Performance Characteristics

(Continued)

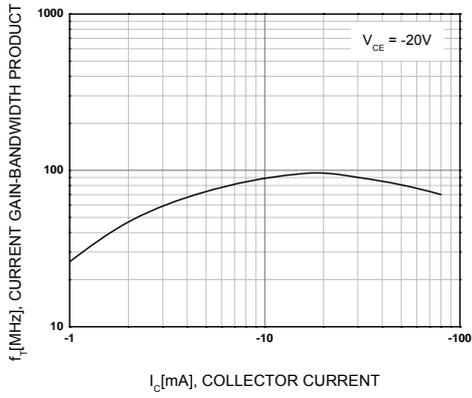
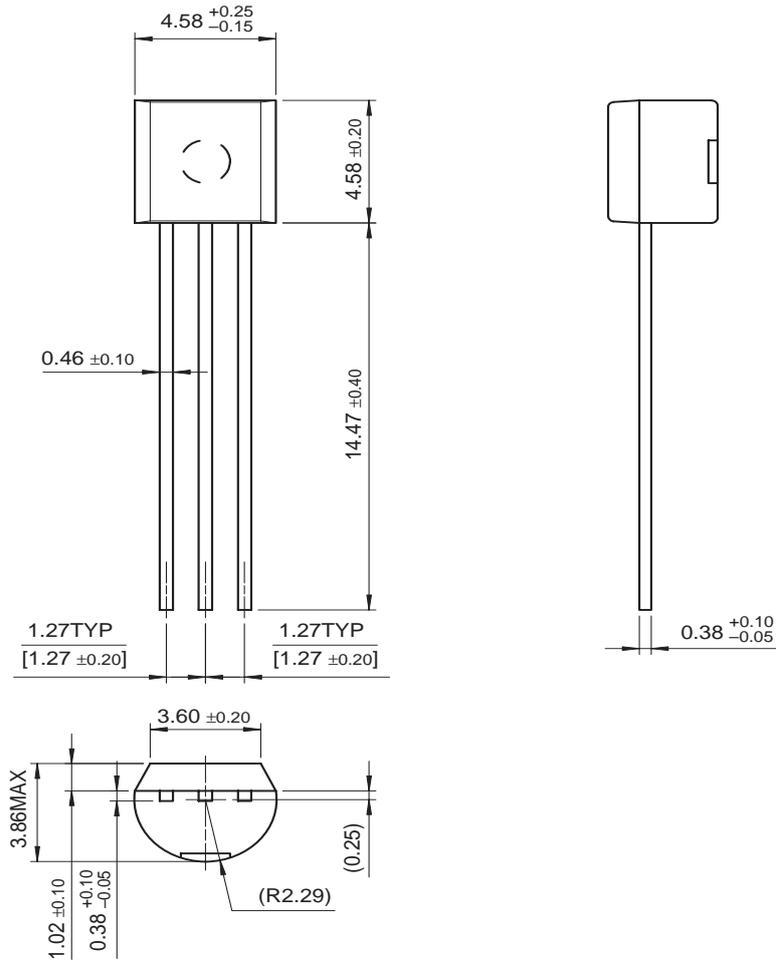


Figure 7. Current Gain Bandwidth Product

Physical Dimensions

TO-92



Dimensions in Millimeters



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Rev. 140

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