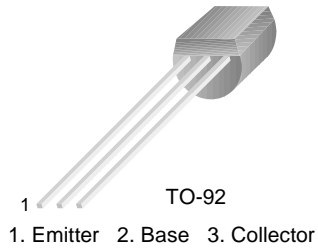


## 2N6520

2N6520

### High Voltage Transistor

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



### PNP Epitaxial Silicon Transistor

#### Absolute Maximum Ratings $T_a = 25^\circ C$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	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	5	mW/°C
$T_J$	Junction Temperature	50	°C
$T_{STG}$	Storage Temperature	-55 ~ 150	°C

#### Electrical Characteristics $T_a = 25^\circ C$ unless otherwise noted

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

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

# Typical Characteristics

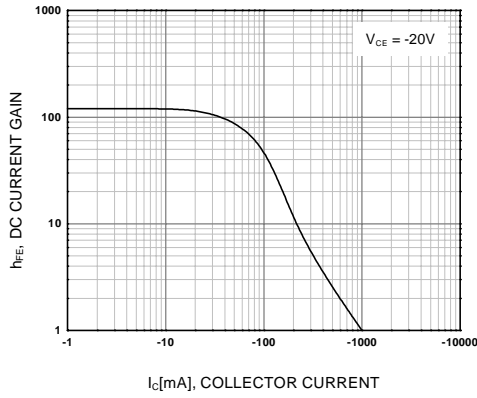


Figure 1. DC current Gain

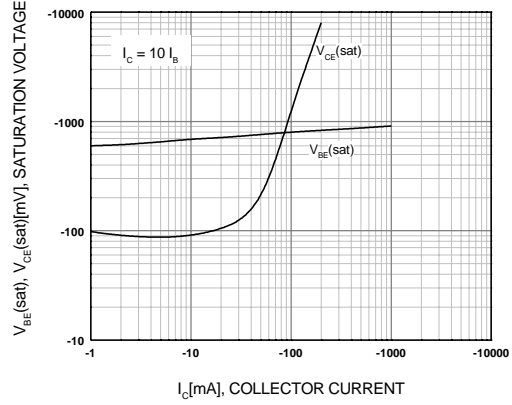


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

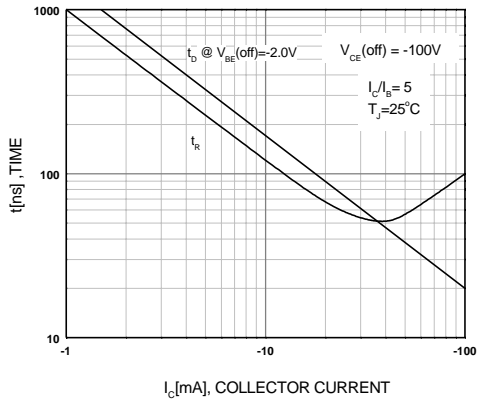


Figure 3. Turn-On Time

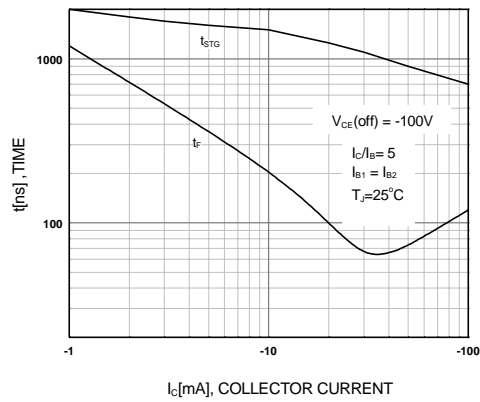


Figure 4. Turn-Off Time

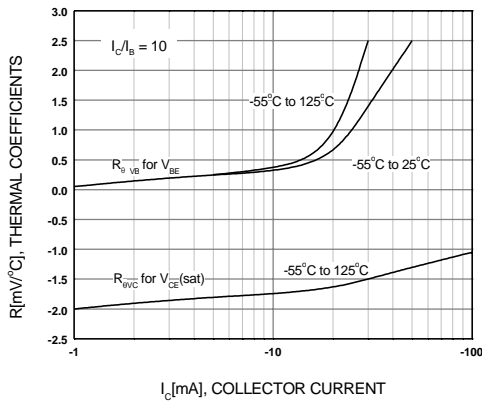


Figure 5. Temperature Coefficients

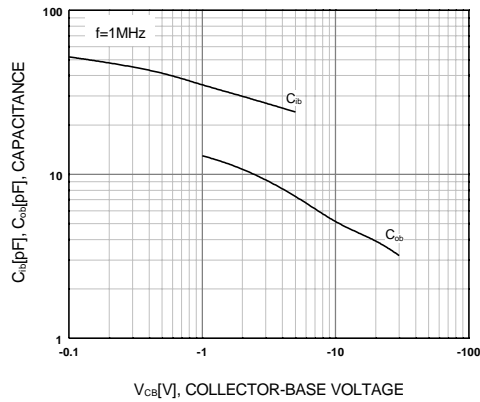


Figure 6. Capacitance

### Typical Characteristics (Continued)

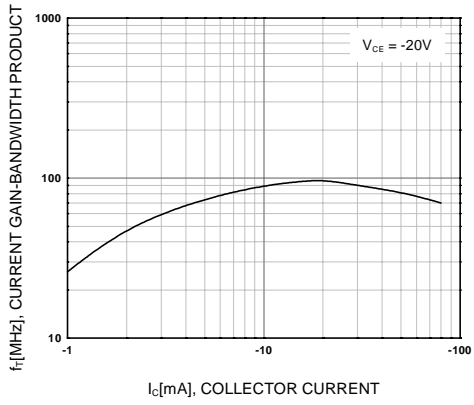


Figure 7. Current Gain Bandwidth Product

# Package Dimensions

2N6520

## TO-92



Dimensions in Millimeters

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