

## 2N6516

## NPN EPITAXIAL SILICON TRANSISTOR

T-29-21

## HIGH VOLTAGE TRANSISOTR

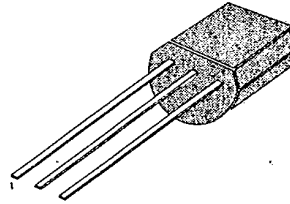
- Collector-Emitter Voltage:  $V_{CE0} = 300V$
- Collector Dissipation:  $P_C(\max) = 625mW$

ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ C$ )

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	300	V
Collector-Emitter Voltage	$V_{CEO}$	300	V
Emitter-Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	500	mA
Collector Dissipation	$P_C$	625	mW
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 ~ 150	$^\circ C$

- Refer to 2N6515 for graphs

TO-92



1. Emitter 2. Base 3. Collector

ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
* Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = 1mA, I_B = 0$	300			V
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = 100\mu A, I_E = 0$	300			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = 10\mu A, I_C = 0$	6			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 200V, I_E = 0$			50	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			50	nA
* DC Current Gain	$h_{FE}$	$I_C = 1mA, V_{CE} = 10V$	30			
		$I_C = 10mA, V_{CE} = 10V$	45			
		$I_C = 30mA, V_{CE} = 10V$	45		270	
		$I_C = 50mA, V_{CE} = 10V$	40		200	
		$I_C = 100mA, V_{CE} = 10V$	20			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10mA, I_B = 1mA$			0.3	V
		$I_C = 20mA, I_B = 2mA$			0.35	V
		$I_C = 30mA, I_B = 3mA$			0.5	V
		$I_C = 50mA, I_B = 5mA$			1	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 10mA, I_B = 1mA$			0.75	V
		$I_C = 20mA, I_B = 2mA$			0.85	V
		$I_C = 30mA, I_B = 3mA$			0.9	V
Collect-Base Capacitance	$C_{cb}$	$V_{CB} = 20V, I_E = 0$			6	pF
* Current Gain Bandwidth Product	$f_T$	$f = 1MHz$ $I_C = 10mA, V_{CE} = 20V$	40		200	MHz
Base Emitter On Voltage	$V_{BE(on)}$	$f = 20MHz$ $I_C = 100mA, V_{CE} = 10V$			2	V

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

