

2N6516

NPN EPITAXIAL SILICON TRANSISTOR

T-29-21

HIGH VOLTAGE TRANSISOTR

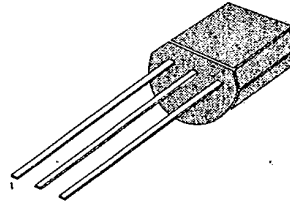
- Collector-Emitter Voltage: $V_{CE0}=300V$
- Collector Dissipation: $P_C(\max)=625mW$

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	
		$I_C=20mA, I_B=2mA$			0.85	
		$I_C=30mA, I_B=3mA$			0.9	
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 $\leq 2\%$

