2N6516 NPN EPITAXIAL SILICON TRANSISTOR

T-29-21

HIGH VOLTAGE TRANSISOTR

- **Collector-Emitter Voltage: V_{CEO}=300V**
- **Collector Dissipation: P_C (max)=625mW**

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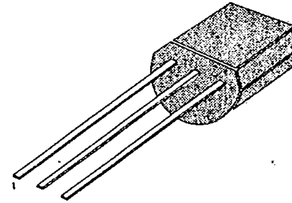

1. Emitter 2. Base 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_a=25°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	°C
Storage Temperature	Tstg	−55~150	°C

- Refer to 2N6515 for graphs

ELECTRICAL CHARACTERISTICS (T_a=25°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=100μA, I_E=0	300			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=10μA, 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	Ccb	V_{CB}=20V, I_E=0 f=1MHz			6	pF
*Current Gain Bandwidth Product	f_T	I_C=10mA, V_{CE}=20V f=20MHz	40		200	MHz
Base Emitter On Voltage	V_{BE} (on)	I_C=100mA, V_{CE}=10V			2	V

* Pulse Test: Pulse Width≤300μs, Duty Cycle≤2%