

# Transistors

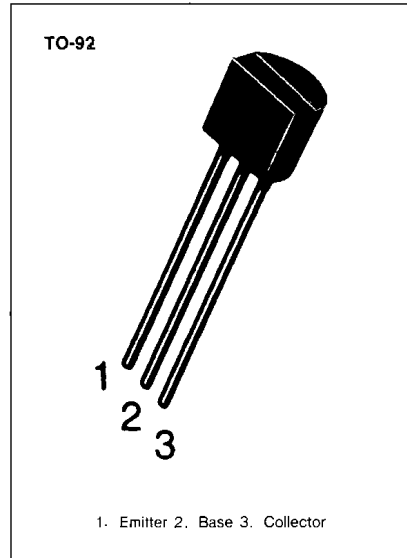
## 2N6515

### HIGH VOLTAGE TRANSISTOR

- Collector-Emitter Voltage:  $V_{CE0} = 250V$
- Collector Dissipation:  $P_C (\text{max}) = 625mW$

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	250	V
Collector-Emitter Voltage	$V_{CEO}$	250	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	$^\circ C$



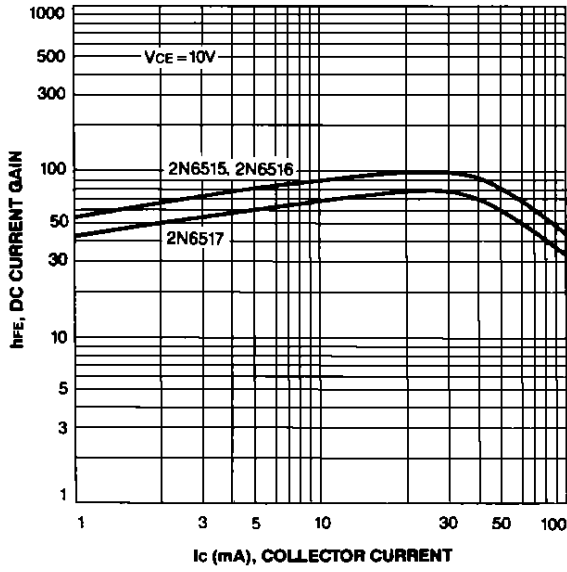
### ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
*Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = 1mA, I_B = 0$	250			V
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = 100\mu A, I_E = 0$	250			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = 10\mu A, I_C = 0$	6			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 150V, I_E = 0$			50	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{BE} = 5V, I_C = 0$			50	nA
*DC Current Gain	$h_{FE}$	$I_C = 1mA, V_{CE} = 10V$	35			
		$I_C = 10mA, V_{CE} = 10V$	50			
		$I_C = 30mA, V_{CE} = 10V$	50		300	
		$I_C = 50mA, V_{CE} = 10V$	45		220	
		$I_C = 100mA, V_{CE} = 10V$	25			
Collector-Emitter Saturation Voltage	$V_{CE} (\text{sat})$	$I_C = 10mA, I_B = 1mA$			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	$V_{BE} (\text{sat})$	$I_C = 10mA, I_B = 1mA$			0.75	V
		$I_C = 20mA, I_B = 2mA$			0.85	V
		$I_C = 30mA, I_B = 3mA$			0.9	V
Collector-Base Capacitance	$C_{cb}$	$V_{CB} = 20V, I_E = 0$			6	pF
		$f = 1MHz$				
*Current Gain Bandwidth Product	$f_T$	$I_C = 10mA, V_{CE} = 20V$	40		200	MHz
		$f = 20MHz$				
Base Emitter On Voltage	$V_{BE} (\text{on})$	$I_C = 100mA, V_{CE} = 10V$			2	V

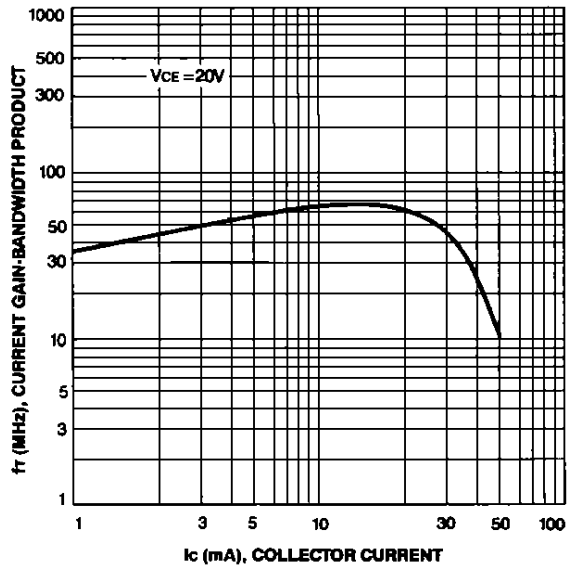
\*Pulse Test: Pulse Width=300 $\mu$ S, Duty Cycle=2%



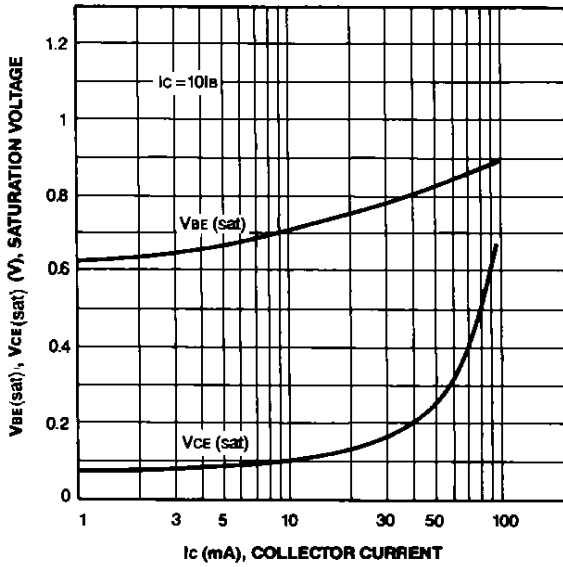
### DC CURRENT GAIN



### CURRENT GAIN BANDWIDTH PRODUCT



### COLLECTOR EMITTER SATURATION VOLTAGE BASE EMITTER SATURATION VOLTAGE



### COLLECTOR-BASE CAPACITANCE

