

PNP Epitaxial Silicon Transistor

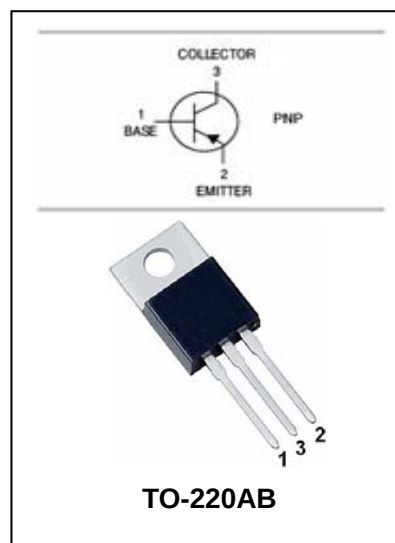
2N6107

FEATURES

- DC Current Gain Specified to 7A.
- Collector-Emitter Sustaining Voltage.
- High Current Gain.



Lead-free



MAXIMUM RATING operating temperature range applies unless otherwise specified

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-80	V
V_{CEO}	Collector-Emitter Voltage	-70	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-7 -10	A
	Continuous Peak		
I_B	Base Current	3	A
P_C	Collector Dissipation	2	W
T_j, T_{stg}	Junction and Storage Temperature	-65 to +150	°C

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ELECTRICAL CHARACTERISTICS Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-emitter Breakdown Voltage	$V_{CEO(SUS)}$	$I_C = -100mA, I_B = 0$	-70			V
Collector Cut-off Current	I_{CEO}	$V_{CE} = -60V, I_B = 0$			-1	mA
Collector Cut-off Current	I_{CEX}	$V_{CE} = -80V, V_{EB(off)} = 1.5V$			-100	mA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-1	mA
DC Current Gain	h_{FE}	$V_{CE} = -4V, I_C = -2A$	30		150	
		$V_{CE} = -4V, I_C = -7A$	2.3			
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -7A, I_B = -3A$			-3.5	V
Base-emitter On Voltage	$V_{BE(on)}$	$I_C = -7A, V_{CE} = -4V$			-3	V
Transition Frequency	f_T	$V_{CE} = -4V, I_C = -0.5A$		10		MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$			250	pF

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TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

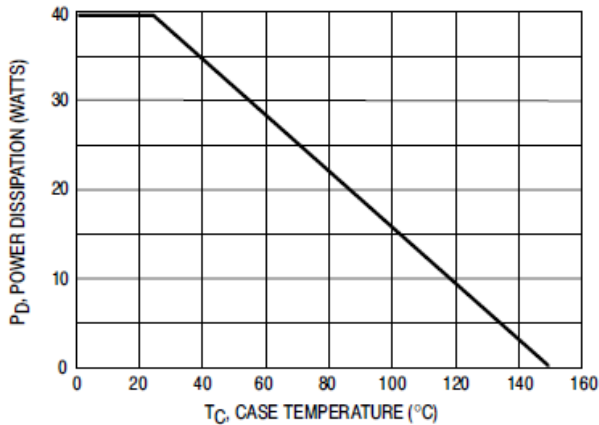


Figure 1. Power Derating

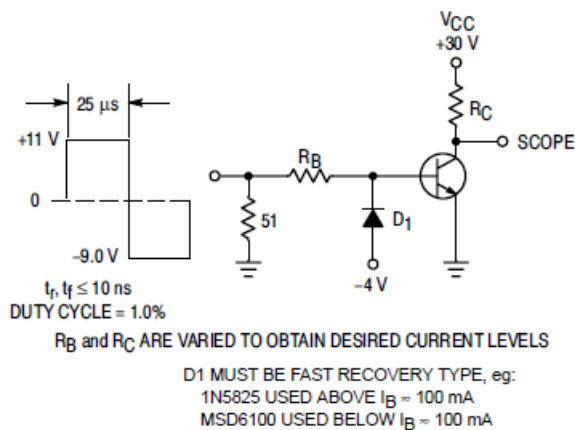


Figure 2. Switching Time Test Circuit

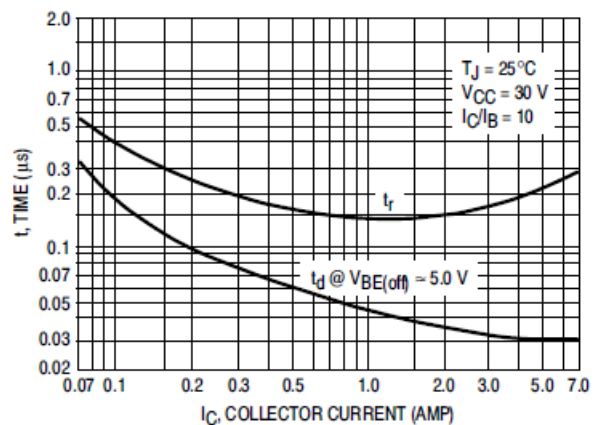


Figure 3. Turn-On Time

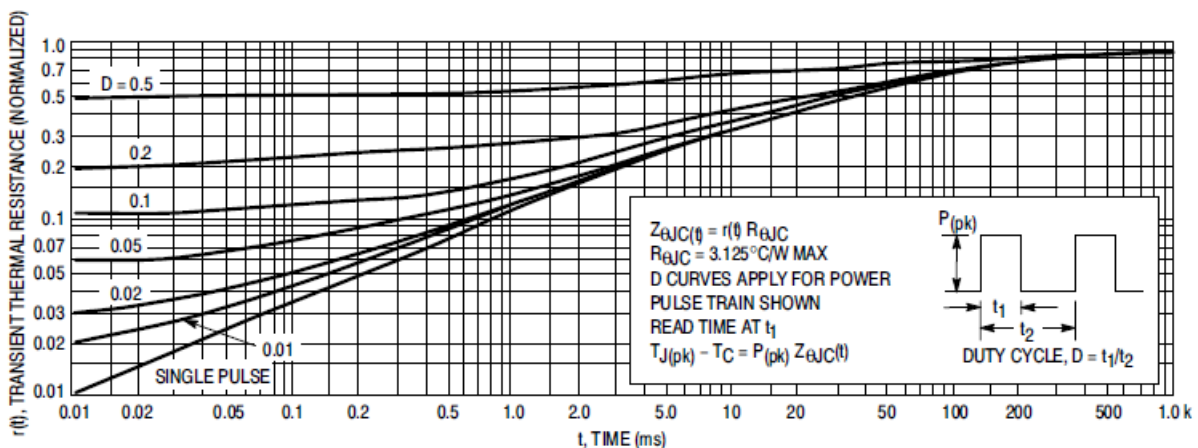


Figure 4. Thermal Response

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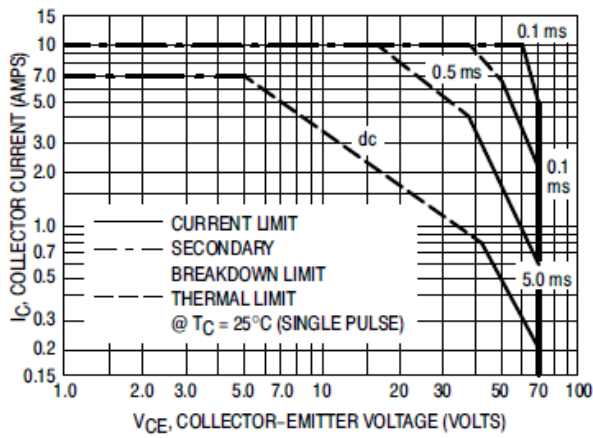


Figure 5. Active-Region Safe Operating Area

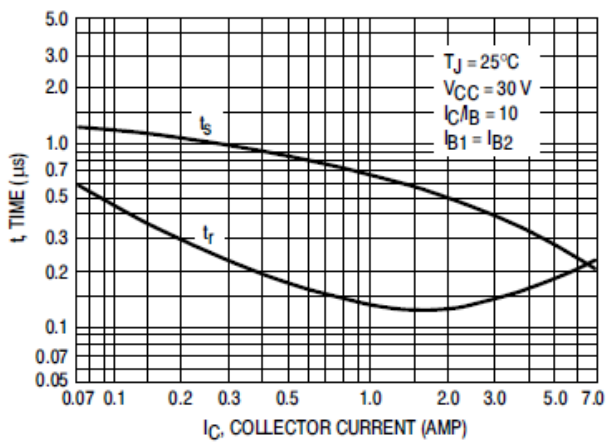


Figure 6. Turn-Off Time

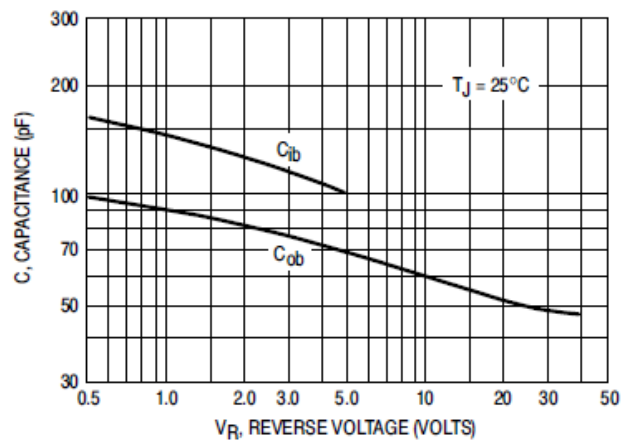


Figure 7. Capacitance

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PACKAGE OUTLINE

Plastic surface mounted package

TO-220AB

