



NEW ENGLAND SEMICONDUCTOR

NPN	PNP
2N6294	2N6296
2N6295	2N6297

*ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Characteristics	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Sustaining Voltage $I_C = 50 \text{ mAde}$, $I_B = 0$	$V_{CE(SUS)}$	60 80		Vdc
Collector Cutoff Current $V_{CE} = 30 \text{ Vdc}$, $I_B = 0$ $V_{CE} = 40 \text{ Vdc}$, $I_B = 0$	I_{CEO}		0.5 0.5	mAde
Collector Cutoff Current $V_{CE} = \text{Rated } V_{CB}$, $V_{EB(off)} = 1.5 \text{ Vdc}$ $V_{CE} = \text{Rated } V_{CB}$, $V_{BE(off)} = 1.5 \text{ Vdc}$ $V_{CE} = \text{Rated } V_{CB}$, $V_{EB(off)} = 1.5 \text{ Vdc}$ $T_C = 150^\circ\text{C}$ $V_{CE} = \text{Rated } V_{CB}$, $V_{BE(off)} = 1.5 \text{ Vdc}$ $T_C = 150^\circ\text{C}$	I_{CEX}		0.5 0.5 5.0 5.0	mAde
Emitter Cutoff Current $V_{BE} = 5.0 \text{ Vdc}$, $I_C = 0$	I_{EBO}		2.0	mAde
ON CHARACTERISTICS (1)				
DC Current Gain $I_C = 2.0 \text{ Ade}$, $V_{CE} = 3.0 \text{ Vdc}$ $I_C = 4.0 \text{ Ade}$, $V_{CE} = 3.0 \text{ Vdc}$	h_{FE}	750 100	18000	
Collector-Emitter Saturation Voltage $I_C = 2.0 \text{ Ade}$, $I_B = 8.0 \text{ mAde}$ $I_C = 4.0 \text{ Ade}$, $I_B = 40 \text{ mAde}$	$V_{CE(sat)}$		2.0 3.0	Vdc
Base-Emitter Saturation Voltage $I_C = 4.0 \text{ Ade}$, $I_B = 40 \text{ mAde}$	$V_{BE(sat)}$		4.0	Vdc
Base-Emitter On Voltage $I_C = 2.0 \text{ Ade}$, $V_{CE} = 3.0 \text{ Vdc}$	$V_{BE(on)}$		2.8	Vdc
DYNAMIC CHARACTERISTICS				
Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio $I_C = 1.5 \text{ Ade}$, $V_{CE} = 3.0 \text{ Vdc}$, $f = 1.0 \text{ Mhz}$	$ h_{fe} $	4.0		
Output Capacitance $V_{CB} = 10 \text{ Vdc}$, $I_E = 0$, $f = 0.1 \text{ Mhz}$	C_{ob}		120 200	p ^r
Small-Signal Current Gain $I_C = 1.5 \text{ Ade}$, $V_{CE} = 3.0 \text{ Vdc}$, $f = 1.0 \text{ kHz}$	h_{fe}	300		

*Indicates JEDEC registered data

FIGURE 2 - SWITCHING TIMES TEST CIRCUIT

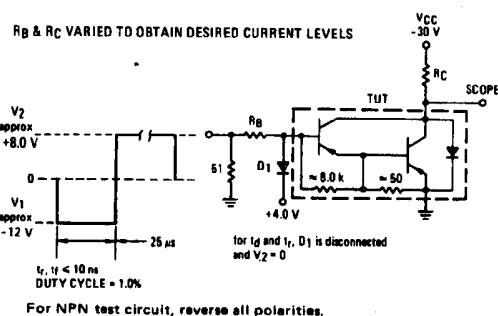
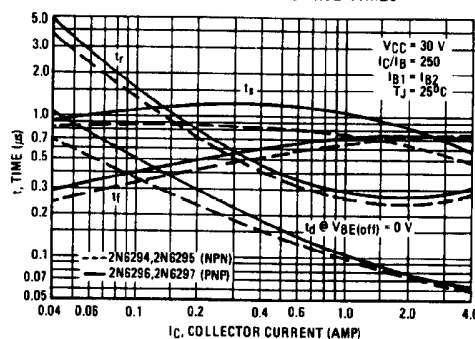


FIGURE 3 - SWITCHING TIMES



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