

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
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ON CHARACTERISTICS ⁽²⁾

Forward-Current Transfer Ratio $I_C = 0.5 \text{ Adc}, V_{CE} = 2.0 \text{ Vdc}$ $I_C = 10 \text{ Adc}, V_{CE} = 2.0 \text{ Vdc}$ $I_C = 25 \text{ Adc}, V_{CE} = 2.0 \text{ Vdc}$	h_{FE}	40 30 12	120	
Collector-Emitter Saturation Voltage $I_C = 10 \text{ Adc}, I_B = 1.0 \text{ Adc}$ $I_C = 25 \text{ Adc}, I_B = 2.5 \text{ Adc}$	$V_{CE(sat)}$		1.0 1.8	Vdc
Base-Emitter Saturation Voltage $I_C = 10 \text{ Adc}, I_B = 1.0 \text{ Adc}$	$V_{BE(sat)}$		1.8	Vdc

DYNAMIC CHARACTERISTICS

Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio $I_C = 1.0 \text{ Adc}, V_{CE} = 10 \text{ Vdc}, f = 10 \text{ MHz}$	$ h_{fe} $	4.0	12	
Output Capacitance $V_{CB} = 10 \text{ Vdc}, I_E = 0, 0.1 \text{ MHz} \leq f \leq 1.0 \text{ MHz}$	C_{obo}		450	pF

SWITCHING CHARACTERISTICS

Turn-On Time $V_{CC} = 80 \text{ Vdc}; I_C = 10 \text{ Adc}; I_B = 1.0 \text{ Adc}$	t_{on}		0.5	μs
Turn-Off Time $V_{CC} = 80 \text{ Vdc}; I_C = 10 \text{ Adc}; I_{B1} = I_{B2} = 1.0 \text{ Adc}$	t_{off}		1.25	μs
Storage Time $V_{CC} = 80 \text{ Vdc}; I_C = 10 \text{ Adc}; I_{B1} = I_{B2} = 1.0 \text{ Adc}$	t_s		1.0	μs

SAFE OPERATING AREA

DC Tests		
T _C = +25 ⁰ C, 1 Cycle, t = 1.0 s		
Test 1		
V _{CE} = 8.0 Vdc, I _C = 25 Adc	All Types	
Test 2		
V _{CE} = 14 Vdc, I _C = 14 Adc	All Types	
Test 3		
V _{CE} = 100 Vdc, I _C = 100 mAdc	2N6338	
V _{CE} = 150 Vdc, I _C = 66 mAdc	2N6341	

(2) Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$.