

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
ON CHARACTERISTICS ⁽²⁾				
Forward-Current Transfer Ratio I _C = 1.0 Adc, V _{CE} = 3.0 Vdc I _C = 6.0 Adc, V _{CE} = 3.0 Vdc I _C = 12 Adc, V _{CE} = 3.0 Vdc	h _{FE}	1,000 1,000 150	18,000	
Collector-Emitter Saturation Voltage I _C = 12 Adc, I _B = 120 mAdc I _C = 6.0 Adc, I _B = 24 mAdc	V _{CE(sat)}		3.0 2.0	Vdc
Base-Emitter Saturation Voltage I _C = 12 Adc, I _B = 120 mAdc	V _{BE(sat)}		4.0	Vdc
Base-Emitter Voltage I _C = 6.0 Adc, V _{CE} = 3.0 Vdc	V _{BE}		2.8	Vdc

DYNAMIC CHARACTERISTICS

Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio I _C = 5.0Adc, V _{CE} = 3.0 Vdc, f = 1.0 MHz	h _{fe}	10	250	
Small-Signal Short-Circuit Forward Current Transfer Ratio I _C = 5.0 Adc, V _{CE} = 3.0 Vdc, f = 1.0 kHz	h _{fe}	1,000		
Output Capacitance V _{CB} = 10 Vdc, I _E = 0, 100 kHz ≤ f ≤ 1.0 MHz	C _{obo}		300	pF

SWITCHING CHARACTERISTICS

Turn-On Time V _{CC} = 30 Vdc; I _C = 5.0 Adc; I _B = 20 mAdc	t _{on}		2.0	μs
Turn-Off Time V _{CC} = 30 Vdc; I _C = 5.0 Adc; I _{B1} = I _{B2} = 20 mAdc	t _{off}		10	μs

SAFE OPERATING AREA**DC Tests**T_C = +25°C + 10°C, -0°, 1 Cycle, t ≥ 1.0 s**Test 1**V_{CE} = 12.5 Vdc, I_C = 12 Adc**Test 2**V_{CE} = 30 Vdc, I_C = 5.0 Adc**Test 3**V_{CE} = 70 Vdc, I_C = 200 mAdc 2N6058**Test 4**V_{CE} = 90 Vdc, I_C = 155 mAdc 2N6059

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