

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
ON CHARACTERISTICS ⁽²⁾				
Forward-Current Transfer Ratio I _C = 50 mAdc, V _{CE} = 5.0 Vdc I _C = 500 mAdc, V _{CE} = 5.0 Vdc I _C = 1.0 Adc, V _{CE} = 10 Vdc	h _{FE}	30 40 20	160	
Collector-Emitter Saturation Voltage I _C = 1.0 Adc, I _B = 0.1 Adc I _C = 0.5 Adc, I _B = 0.05 Adc	V _{CE(sat)}		2.5 1.0	Vdc
Base-Emitter Voltage I _C = 1.0 Adc, V _{CE} = 10 Vdc	V _{BE(on)}		1.5	Vdc

DYNAMIC CHARACTERISTICS

Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio I _C = 500 mAdc, V _{CE} = 10 Vdc, f = 10 MHz	h _{fe}	1.0	8.0	
Output Capacitance V _{CB} = 10 Vdc, I _E = 0, 0.1 MHz ≤ f ≤ 1.0 MHz	C _{obo}		50	pF

SWITCHING CHARACTERISTICS

Turn-On Time V _{CC} = 30 Vdc; I _C = 0.5 Adc; I _B = 0.05 Adc	t _{on}		0.25	μs
Turn-Off Time V _{CC} = 30 Vdc; I _C = 0.5 Adc; I _B = I _B = 0.05 Adc	t _{off}		2.5	μs

SAFE OPERATING AREA

DC Tests T _C = +25°C, 1 Cycle, t = 1.0 s Test 1 V _{CE} = 6.25 Vdc, I _C = 4.0 Adc Test 2 V _{CE} = 20 Vdc, I _C = 1.25 Adc Test 3 V _{CE} = 50 Vdc, I _C = 150 mAdc 2N3766 V _{CE} = 65 Vdc, I _C = 150 mAdc 2N3767				
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(2) Pulse Test: Pulse Width = 300μs, Duty Cycle ≤ 2.0%.

