

2N3879 JAN SERIES

ELECTRICAL CHARACTERISTICS (con't)

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

Forward-Current Transfer Ratio I _C = 0.5 Adc, V _{CE} = 5.0 Vdc I _C = 4.0 Adc, V _{CE} = 5.0 Vdc I _C = 4.0 Adc, V _{CE} = 2.0 Vdc	h _{FE}	40 20 12	80 100	
Collector-Emitter Saturation Voltage I _C = 4.0 Adc, I _B = 0.4 Adc	V _{CE(sat)}		1.2	Vdc
Base-Emitter Saturation Voltage I _C = 4.0 Adc, I _B = 0.4 Adc	V _{BE(sat)}		2.0	Vdc
Base-Emitter Voltage I _C = 4.0 Adc, V _{CE} = 2.0 Vdc	V _{BE(on)}		1.8	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}	4.0	20	
Output Capacitance V _{CB} = 10 Vdc, I _E = 0, 0.1 MHz ≤ f ≤ 1.0 MHz	C _{obo}		175	pF

SWITCHING CHARACTERISTICS

Turn-On Time V _{CC} = 30 Vdc; I _C = 4.0 Adc; I _B = 0.4 Adc	t _{on}		0.44	μs
Turn-Off Time V _{CC} = 30 Vdc; I _C = 4.0 Adc; I _B = -I _B = 0.4 Adc	t _{off}		1.2	μs

SAFE OPERATING AREA

DC Tests

T_C = +25°C, 1 Cycle, t = 1.0 s

Test 1

V_{CE} = 5.0 Vdc, I_C = 7.0 Adc

Test 2

V_{CE} = 28 Vdc, I_C = 1.25 Adc

Test 3

V_{CE} = 40 Vdc, I_C = 500 mAdc

Test 4

V_{CE} = 75 Vdc, I_C = 100 mAdc

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