

2N3439, L, 2N3440, L, JAN SERIES

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS (con't)				
Collector-Emitter Cutoff Current V _{CE} = 450 Vdc, V _{BE} = -1.5 Vdc V _{CE} = 300 Vdc, V _{BE} = -1.5 Vdc	I _{CEX}		5.0 5.0	μAdc μAdc
Collector-Base Cutoff Current V _{CB} = 360 Vdc V _{CB} = 250 Vdc V _{CB} = 450 Vdc V _{CB} = 300 Vdc	I _{CBO}		2.0 2.0 5.0 5.0	μAdc

ON CHARACTERISTICS ⁽³⁾

Forward-Current Transfer Ratio I _C = 20 mAdc, V _{CE} = 10 Vdc I _C = 2.0 mAdc, V _{CE} = 10 Vdc I _C = 0.2 mAdc, V _{CE} = 10 Vdc	h _{FE}	40 30 10	160	
Collector-Emitter Saturation Voltage I _C = 50 mAdc, I _B = 4.0 mAdc	V _{CE(sat)}		0.5	Vdc
Base-Emitter Saturation Voltage I _C = 50 mAdc, I _B = 4.0 mAdc	V _{BE(sat)}		1.3	Vdc

DYNAMIC CHARACTERISTICS

Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio I _C = 10 mAdc, V _{CE} = 10 Vdc, f = 5.0 MHz	h _{fe}	3.0	15	
Forward Current Transfer Ratio I _C = 5.0 mAdc, V _{CE} = 10 Vdc, f = 1.0 kHz	h _{fe}	25		
Output Capacitance V _{CB} = 10 Vdc, I _E = 0, 100 kHz ≤ f ≤ 1.0 MHz	C _{obo}		10	pF
Input Capacitance V _{EB} = 5.0 Vdc, I _C = 0, 100 kHz ≤ f ≤ 1.0 MHz	C _{ibo}		75	pF

SWITCHING CHARACTERISTICS

Turn-On Time V _{CC} = 200 Vdc; I _C = 20 mAdc, I _{B1} = 2.0 mAdc	t _{on}		1.0	μs
Turn-Off Time V _{CC} = 200 Vdc; I _C = 20 mAdc, I _{B1} = -I _{B2} = 2.0 mAdc	t _{off}		10	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 = 1.0 Adc Both Types
Test 2 V _{CE} = 350 Vdc, I _C = 14 mAdc 2N3439
Test 3 V _{CE} = 250 Vdc, I _C = 20 mAdc 2N3440

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