

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
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ON CHARACTERISTICS ⁽³⁾

Forward Current Transfer Ratio $I_C = 250 \text{ mAdc}, V_{CE} = 1.0 \text{ Vdc}$ $I_C = 500 \text{ mAdc}, V_{CE} = 1.0 \text{ Vdc}$	h_{FE}	30 30	150	
Collector-Emitter Saturation Voltage $I_C = 500 \text{ Adc}, I_B = 50 \text{ Adc}$ $I_C = 1.0 \text{ Adc}, I_B = 0.1 \text{ Adc}$	$V_{CE(sat)}$		0.3 0.6	Vdc
Base-Emitter Saturation Voltage $I_C = 500 \text{ Adc}, I_B = 50 \text{ Adc}$ $I_C = 1.0 \text{ Adc}, I_B = 0.1 \text{ Adc}$	$V_{BE(sat)}$		1.0 1.5	Vdc

DYNAMIC CHARACTERISTICS

Magnitude of Common Emitter Small-Signal Short Circuit Forward-Current Transfer Ratio $I_C = 100 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 10 \text{ MHz}$	$ h_{fe} $	3.0		
Output Capacitance $V_{CB} = 10 \text{ Vdc}, I_E = 0, f = 100 \text{ kHz}$	C_{obo}		100	pF

SAFE OPERATING AREA**DC Tests** $T_C = +25^\circ\text{C}$, 1 Cycle, $t \geq 0.5 \text{ s}$ **Test 1** $V_{CE} = 6.0 \text{ Vdc}, I_C = 1.0 \text{ Adc}$ **Test 2** $V_{CE} = 12 \text{ Vdc}, I_C = 500 \text{ mAdc}$ **Test 3** $V_{CE} = 30 \text{ Vdc}, I_C = 166 \text{ mAdc}$ 2N4237 $V_{CE} = 50 \text{ Vdc}, I_C = 100 \text{ mAdc}$ 2N4238 $V_{CE} = 70 \text{ Vdc}, I_C = 71 \text{ mAdc}$ 2N4239