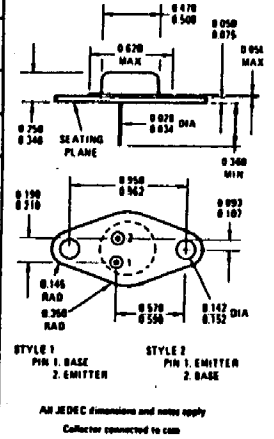


# 2N3767

MAXIMUM RATINGS ( $T_C = 25^\circ\text{C}$  unless otherwise noted)

Rating	Symbol	2N3767	Unit
Collector-Base Voltage	$V_{CB}$	100	Vdc
Emitter-Base Voltage	$V_{EB}$	6.0	Vdc
Collector-Emitter Voltage	$V_{CEO}$	80	Vdc
Collector Current - Continuous	$I_C$	4.0	Adc
Peak		4.0	
Base Current	$I_B$	2.0	Adc
Total Device Dissipation @ $T_C = 25^\circ\text{C}$	$P_D$	20	Watts
Derate above $25^\circ\text{C}$		0.133	W/ $^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$	7.5	$^\circ\text{C}/\text{W}$
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to $^{\circ}175$	$^\circ\text{C}$

(TO-66)



ELECTRICAL CHARACTERISTICS ( $T_C = 25^\circ\text{C}$  unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
<b>OFF CHARACTERISTICS</b>				
Collector-Emitter Voltage <sup>(1)</sup> ( $I_C = 100 \text{ mAdc}, I_B = 0$ )	$V_{CEO}$	80	—	Vdc
Emitter-Base Cutoff Current ( $V_{EB} = 6 \text{ Vdc}$ )	$I_{EBO}$	—	0.75	mAdc
Collector Cutoff Current ( $V_{CE} = 100 \text{ Vdc}, V_{BE} = 1.5 \text{ Vdc}$ )	$I_{CEX}$	—	0.1	mAdc
( $V_{CE} = 70 \text{ Vdc}, V_{BE} = 1.5 \text{ Vdc}, T_C = 150^\circ\text{C}$ )		—	1.0	
Collector-Emitter Cutoff Current ( $V_{CE} = 80 \text{ Vdc}, I_B = 0$ )	$I_{CEO}$	—	0.7	mAdc
Collector-Base Cutoff Current ( $V_{CB} = 100 \text{ Vdc}, I_E = 0$ )	$I_{CBO}$	—	0.1	mAdc

**ON CHARACTERISTICS**

DC Current Gain ( $I_C = 50 \text{ mAdc}, V_{CE} = 5 \text{ Vdc}$ ) ( $I_C = 500 \text{ mAdc}, V_{CE} = 5 \text{ Vdc}$ ) ( $I_C = 1.0 \text{ Adc}, V_{CE} = 10 \text{ Vdc}$ )	$h_{FE}$	30 40 20	— 160 —	—
Collector-Emitter Saturation Voltage ( $I_C = 1 \text{ Adc}, I_B = 0.1 \text{ Adc}$ ) ( $I_C = 500 \text{ mAdc}, I_B = 50 \text{ mAdc}$ )	$V_{CE(sat)}$	— —	2.5 1.0	Vdc
Base-Emitter Voltage ( $I_C = 1.0 \text{ Adc}, V_{CE} = 10 \text{ Vdc}$ )	$V_{BE}$	—	1.5	Vdc

**TRANSIENT CHARACTERISTICS**

Current-Gain - Bandwidth Product ( $I_C = 500 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 10 \text{ MHz}$ )	$f_T$	10	—	MHz
Common-Base Output Capacitance ( $V_{CB} = 10 \text{ Vdc}, I_C = 0 \text{ Adc}, f = 100 \text{ kHz}$ )	$C_{ob}$	—	50	pF
Small-Signal Current Gain ( $I_C = 100 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 1 \text{ kHz}$ )	$h_{fe}$	40	—	—

<sup>(1)</sup> Pulse Test: Pulse Width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2.0\%$

