

2N3691

NPN SMALL SIGNAL GENERAL PURPOSE AMPLIFIER

ABSOLUTE MAXIMUM RATINGS [Note 1]

Maximum Temperatures

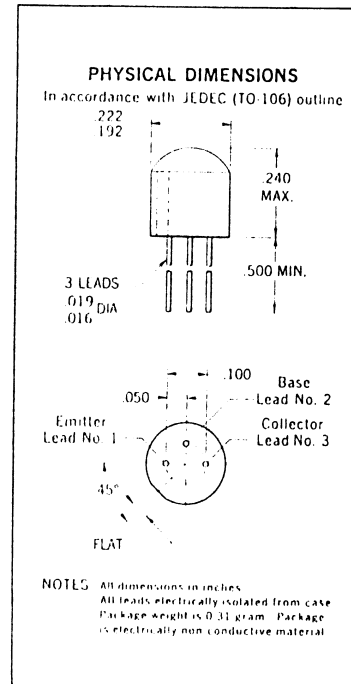
Storage Temperature	-55°C to +125°C
Operating Junction Temperature	125°C Maximum
Soldering Temperature (10 sec time limit)	260°C Maximum

Maximum Power Dissipation

Total Dissipation at 25°C Case Temperature [Note 2]	0.5 Watt
at 65°C Case Temperature [Note 2]	0.3 Watt
at 25°C Ambient Temperature [Note 2]	0.2 Watt

Maximum Voltages

V _{CBO} Collector to Base Voltage	35 Volts
V _{CEO} Collector to Emitter Voltage [Note 3]	25 Volts
V _{EBO} Emitter to Base Voltage	4.0 Volts



ELECTRICAL CHARACTERISTICS (25°C Free Air Temperature unless otherwise noted)

Symbol	Characteristic	Min.	Max.	Units	Test Conditions
h _{FE}	DC Pulse Current Gain [Note 4]	40	160		I _C = 10 mA V _{CE} = 1.0 V
h _{fe}	High Frequency Current Gain (f = 100 MHz)	2.0			I _C = 10 mA V _{CE} = 15 V
V _{CE(sat)}	Collector Saturation Voltage		0.7	Volts	I _C = 10 mA I _B = 1.0 mA
V _{BE(sat)}	Base Saturation Voltage		0.9	Volts	I _C = 10 mA I _B = 1.0 mA
I _{CBO}	Collector Cutoff Current		50	nA	I _E = 0 V _{CB} = 30 V
I _{CBO} (65°C)	Collector Cutoff Current		5.0	μA	I _E = 0 V _{CB} = 30 V
C _{obo}	Common-Base, Open-Circuit Output Capacitance		6.0	pF	I _E = 0 V _{CB} = 10 V
V _{CEO(sust)}	Collector to Emitter Sustaining Voltage [Notes 3 and 4]	25		Volts	I _C = 10 mA I _B = 0 (pulsed)
BV _{CBO}	Collector to Base Breakdown Voltage	35		Volts	I _C = 100 μA I _E = 0
BV _{EBO}	Emitter to Base Breakdown Voltage	4.0		Volts	I _C = 0 I _E = 10 μA

NOTES:

- (1) These ratings are limiting values above which the serviceability of any individual semiconductor device may be impaired.
- (2) These ratings give a maximum junction temperature of 125°C and junction-to-case thermal resistance of 200°C/Watt (derating factor of 5.0 mW/°C); junction-to-ambient thermal resistance of 500°C/Watt (derating factor of 2.0 mW/°C).
- (3) Rating refers to a high-current point where collector-to-emitter voltage is lowest.
- (4) Pulse Conditions: length = 300 μs; duty cycle = 1%.

