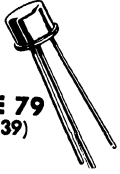


2N1990 (SILICON)



CASE 79
(TO-39)

NPN silicon transistor designed for driving neon display tubes.

Collector connected to case

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Base Voltage	V_{CB}	100	Vdc
Emitter-Base Voltage	V_{EB}	3.0	Vdc
Collector Current-Continuous	I_C	1.0	Adc
Total Device Dissipation $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	0.6 4.8	W mW/ $^\circ\text{C}$
Total Device Dissipation $T_C = 2.5^\circ\text{C}$ @ $T_C = 100^\circ\text{C}$	P_D	2.0 1.0	W
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	θ_{JC}	62.5	$^\circ\text{C}/\text{W}$
Thermal Resistance, Junction to Ambient	θ_{JA}	208	$^\circ\text{C}/\text{W}$

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

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector Cutoff Current ($V_{CE} = 75\text{ Vdc}, I_B = 10\ \mu\text{Adc}$) ($V_{CE} = 75\text{ Vdc}, I_B = 250\ \mu\text{Adc}, T_A = 150^\circ\text{C}$)	I_{CEX}	- -	10 250	μAdc
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ON CHARACTERISTICS

DC Current Gain ($I_C = 30\text{ mAdc}, V_{CE} = 10\text{ Vdc}$)	h_{FE}	20	-	-
Collector-Emitter Saturation Voltage ($I_C = 2.0\text{ mAdc}, I_B = 0.2\text{ mAdc}$)	$V_{CE(sat)}$	-	0.5	Vdc
Base-Emitter Saturation Voltage ($I_C = 2.0\text{ mAdc}, I_B = 0.2\text{ mAdc}$)	$V_{BE(sat)}$	-	1.0	Vdc

2N1991 (SILICON)

For Specifications, See 2N1131 Data.