2N1990 (SILICON)

CASE 79
(TO-39)

Collector connected to case

NPN silicon transistor designed for driving neon display tubes.

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°C Derate above 25°C	P_D	0.6 4.8	W mW/°C
Total Device Dissipation T_C = 2.5°C @ T_C = 100°C	P_D	2.0 1.0	W
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	θ_{JC}	62.5	°C/W
Thermal Resistance, Junction to Ambient	θ_{JA}	208	°C/W

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector Cutoff Current (V_{CE} = 75 Vdc, I_B = 10 μAdc) (V_{CE} = 75 Vdc, I_B = 250 μAdc, T_A = 150°C	I_{CEX}	- -	10 250	μAdc
ON CHARACTERISTICS				
DC Current Gain (I_C = 30 mAdc, V_{CE} = 10 Vdc)	h_{FE}	20	-	-
Collector-Emitter Saturation Voltage (I_C = 2.0 mAdc, I_B = 0.2 mAdc)	$V_{CE(sat)}$	-	0.5	Vdc
Base-Emitter Saturation Voltage (I_C = 2.0 mAdc, I_B = 0.2 mAdc)	$V_{BE(sat)}$	-	1.0	Vdc

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For Specifications, See 2N1131 Data.