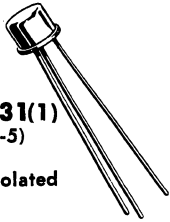


2N1408 (GERMANIUM)



CASE 31(1)
(TO-5)

All leads isolated

PNP germanium transistor for high voltage neon driver, solenoid and relay driver circuits.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Base Voltage	V_{CB}	50	Vdc
Collector-Emitter Voltage	V_{CES}	50	Vdc
Emitter-Base Voltage	V_{EB}	10	Vdc
Collector Current	I_C	200	mA
Collector Dissipation at $T_A = 25^\circ\text{C}$	P_D	150	mW
derating factor		2.0	mW/ $^\circ\text{C}$
Junction Temperature Range	T_J	-65 to +100	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Max	Unit
Collector-Base Cutoff Current ($V_{CB} = 5 \text{ Vdc}$, $I_E = 0$)	I_{CBO}	---	7.0	μAdc
Emitter-Base Cutoff Current ($V_{EB} = 5 \text{ Vdc}$, $I_C = 0$)	I_{EBO}	---	7.0	μAdc
Collector-Emitter Leakage Current ($V_{CB} = 50 \text{ Vdc}$, $R_{BE} = 0$)	I_{CES}	---	150	μAdc
Collector-Base Breakdown Voltage ($I_C = 25 \mu\text{Adc}$, $I_E = 0$)	BV_{CBO}	50	---	Vdc
Emitter-Base Breakdown Voltage ($I_E = 25 \mu\text{Adc}$, $I_C = 0$)	BV_{EBO}	10	---	Vdc
Collector-Emitter Punch-Thru Voltage ($I_E = 25 \mu\text{Adc}$)	V_{pt}	50	---	Vdc
Base-Emitter Input Voltage ($I_B = 1.0 \text{ mAdc}$, $V_{CE} = 1.0 \text{ Vdc}$)	V_{BE}	---	0.6	Vdc
DC Current Gain ($V_{CE} = 1 \text{ Vdc}$, $I_B = 1 \text{ mAdc}$)	h_{FE}	10	---	---
Small Signal Current Gain ($V_{CE} = 5.0 \text{ Vdc}$, $I_E = 1.0 \text{ mA}$, $f = 1 \text{ kHz}$)	h_{fe}	10	---	---
Output Admittance ($V_{CB} = 5.0 \text{ Vdc}$, $I_E = 1.0 \text{ mA}$, $f = 1 \text{ kHz}$)	h_{ob}	---	2.0	μmhos