SEMICOA SEMICONDUCTORS

Data Sheet No. 2N2484

Type 2N2484
Geometry 0220 / 0307
Polarity NPN
Qual Level: Pending

Generic Part Number:
2N2484

REF: MIL-PRF-19500/376

Features:

Request Quotation

- General-purpose high gain, low power transistor which operates over a wide temperature range.
- Housed in a TO-18 case.
- Also available in chip form using the 0220 / 0307 chip geometry.
- The Min and Max limits shown are per MIL-PRF-19500/376 which Semicoa meets in all cases.

TO-18

Maximum Ratings

T_C = 25°C unless otherwise specified

Rating	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	60	V
Collector-Base Voltage	V_{CBO}	60	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Collector Current, Continuous	I_C	50	mA
Operating Junction Temperature	T_J	-65 to +200	°C
Storage Temperature	T_{STG}	-65 to +200	°C

Electrical Characteristics

T_C = 25°C unless otherwise specified

OFF Characteristics	Symbol	Min	Max	Unit
Collector-Base Breakdown Voltage I_C = 10 µA	$V_{(BR)CBO}$	60	---	V
Collector-Emitter Breakdown Voltage I_C = 10 mA	$V_{(BR)CEO}$	60	---	V
Emitter-Base Breakdown Voltage I_E = 10 µA	$V_{(BR)EBO}$	6.0	---	V
Collector-Base Cutoff Current V_{CB} = 45 V V_{CB} = 45 V, T_A = +150°C	 I_{CBO1} I_{CBO2}	 --- ---	 5 10	 nA µA
Emitter-Base Cutoff Current V_{EB} = 5.0 V	I_{EBO}	---	2	nA
Collector-Emitter Cutoff Current V_{CE} = 5 V V_{CE} =45 V	 I_{CEO} I_{CES}	 --- ---	 2 5	 nA nA

ON Characteristics	Symbol	Min	Max	Unit
DC Current Gain				
I_C = 1 µA, V_{CE} = 5 V	h_{FE1}	45	---	---
I_C = 10 µA, V_{CE} = 5 V	h_{FE2}	200	500	---
I_C = 100 µA, V_{CE} = 5 V	h_{FE3}	225	675	---
I_C = 500 µA, V_{CE} = 5 V	h_{FE4}	250	800	---
I_C = 1 mA, V_{CE} = 5 V	h_{FE5}	250	800	---
I_C = 10 mA, V_{CE} = 5 V (pulsed)	h_{FE6}	225	800	---
I_C = 10 µA, V_{CE} = 5 V, T_A = -55°C	h_{FE7}	35	---	---
Collector-Emitter Saturation Voltage Saturated				
I_C = 150 mA, I_B = 100 µA	$V_{CE(sat)}$	---	0.3	V dc
Base-Emitter Saturation Voltage Non Saturated				
V_{CE} = 5 V, I_C = 100 µA	V_{BE}	0.5	0.7	V dc

Small Signal Characteristics	Symbol	Min	Max	Unit
Magnitude of Short-Circuit Forward Current Transfer Ratio				
V_{CE} = 5 V, I_C = 50 µA, f = 5 MHz	$\|h_{FE}\|1$	3.0	---	---
V_{CE} = 5 V, I_C = 500 µA, f = 30 MHz	$\|h_{FE}\|2$	2.0	7.0	---
Open Circuit Output Admittance V_{CE} = 5 V, I_C = 1 mA, f = 1 kHz	hoe	---	40	µohms
Open-Circuit, Reverse Voltage Transfer Ratio V_{CE} = 5 V, I_C = 1 mA, f = 1 kHz	h_{RE}	---	$8x10^{-4}$	---
Short-Circuit Input Impedance V_{CE} = 5 V, I_C = 1 mA, f = 1 kHz	h_{IE}	3.5	24	ohms
Short Circuit Forward Current Transfer Ratio V_{CE} = 5 V, I_C = 1 mA, f = 1 kHz	h_{FE}	250	900	---
Open Circuit Output Capacitance V_{CB} = 5 V, I_E = 0, 100 kHz < f < 1 MHz	C_{OBO}	---	5.0	pF
Input Capacitance, Output Open Circuited V_{EB} = 0.5 V, I_C = 0, 100 kHz < f < 1 MHz	C_{IBO}	---	6.0	pF
Noise Figure				
f = 100 Hz, V_{CE} = 5 V, I_C = 10 µA, Rg = 10 kohm	F1	---	7.5	dB
f = 1 kHz, V_{CE} = 5 V, I_C = 10 µA, Rg = 10 kohm	F2	---	3	dB
f = 10 kHz, V_{CE} = 5 V, I_C = 10 µA, Rg = 10 kohm	F3	---	2	dB
f = 10 Hz to 15.7 kHz, V_{CE} = 5 V, I_C = 10 µA, Rg = 10 kohm (wideband noise)	F4	---	3	dB