SEMICOA SEMICONDUCTORS

Data Sheet No. 2N4957

Type 2N4957
Geometry 0006
Polarity PNP
Qual Level: JAN - JANS

Generic Part Number: 2N4957

REF: MIL-PRF-19500/426

Features:

Request Quotation

- Small signal RF silicon transistor designed for high-gain, low-noise applications.
- Housed in a TO-72 case.
- Also available in chip form using the 0006 chip geometry.
- The Min and Max limits shown are per MIL-PRF-19500/426 which Semicoa meets in all cases.

TO-72

Maximum Ratings

T_C = 25°C unless otherwise specified

Rating	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	30	V
Collector-Base Voltage	V_{CBO}	30	V
Emitter-Base Voltage	V_{EBO}	3.0	V
Collector Current, Continuous	I_C	30	A
Operating Junction Temperature	T_J	-65 to +200	°C
Storage Temperature	T_{STG}	-65 to +200	°C

Electrical Characteristics

$T_C = 25^oC$ unless otherwise specified

OFF Characteristics	Symbol	Min	Max	Unit
Collector-Base Breakdown Voltage $I_C = 100\ \mu A, I_E = 0$	$V_{(BR)CBO}$	30	---	V
Collector-Emitter Breakdown Voltage $I_C = 1.0\ mA, I_B = 0$	$V_{(BR)CEO}$	30	---	V
Emitter-Base Breakdown Voltage $I_E = 100\ \mu A, I_C = 0$	$V_{(BR)EBO}$	3.0	---	V
Collector-Base Cutoff Current $V_{CB} = 20\ V, I_E\ 0, T_C = +25^oC$	I_{CBO1}	---	100	na
Collector-Base Cutoff Current $V_{CB} = 20\ V, I_E\ 0, T_C = +150^oC$	I_{CBO2}	---	100	µA

ON Characteristics	Symbol	Min	Max	Unit
DC Current Gain				
$I_C = 0.5\ mA, V_{CE} = 10\ V$	h_{FE1}	15	---	---
$I_C = 2.0\ mA, V_{CE} = 10\ V$	h_{FE2}	20	---	---
$I_C = 5.0\ mA, V_{CE} = 10\ V$	h_{FE3}	30	165	---
$I_C = 5.0\ mA, V_{CE} = 10\ V, T_A = -55^oC$	h_{FE4}	10	---	---

Small Signal Characteristics	Symbol	Min	Max	Unit
Magnitude of Common Emitter Small Signal Short Circuit Forward Current Transfer Ratio $V_{CE} = 10\ V, I_E = 2.0\ mA, f = 100\ MHz$	$\|h_{fe}\|$	12	36	---
Collector to Base Feedback Capacitance $V_{CB} = 10\ V, I_E = 0, 100\ kHz < f < 1\ MHz$	C_{cb}	---	0.8	pF
Collector to Base Time Constant $V_{CB} = 10\ V, I_E = 2.0\ mA, f = 63.6\ MHz$	$r_{b'}C_C$	1.0	8.0	ps
Common Emitter Small Signal Power Gain $V_{CE} = 10\ V, I_C = 2.0\ mA, f = 450\ MHz$	G_{PE}	17	25	dB