

SILICON TRANSISTOR

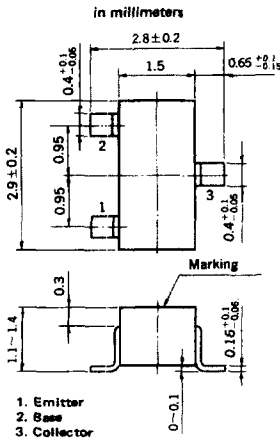
2SA1226

HIGH FREQUENCY AMPLIFIER

PNP SILICON EPITAXIAL TRANSISTOR

MINI MOLD

PACKAGE DIMENSIONS



FEATURES

- High Gain Bandwidth product $f_T = 400$ MHz TYP.
- Low Output Capacitance $C_{ob} = 1.1$ pF TYP.
- Low Noise, NF = 3.5 dB TYP. ($f = 1.0$ MHz)

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Current ($T_a = 25^\circ\text{C}$)

Collector to Base Voltage ($R_{BE} = \infty$)	V_{CBO}	-40	V
Collector to Emitter Voltage (Open Base)	V_{CEO}	-40	V
Emitter to Base Voltage	V_{EB0}	-5.0	V
Collector Current (DC)	I_C	-30	mA

Maximum Power Dissipation

Total Power Dissipation at 25°C Ambient Temperature	P_T	200	mW
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Maximum Temperatures

Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CBO}			-0.1	μA	$V_{CB} = -40$ V, $I_E = 0$
Emitter Cutoff Current	I_{EBO}			-0.1	μA	$V_{EB} = -4.0$ V, $I_C = 0$
DC Current Gain	h_{FE}	40	90	180		$V_{CE} = -10$ V, $I_C = -1.0$ mA
Collector Saturation Voltage	$V_{CE(sat)}$		-0.09	-0.3	V	$I_C = -10$ mA, $I_B = -1.0$ mA
Base to Emitter Voltage	V_{BE}	-0.67	-0.72		V	$V_{CE} = -10$ V, $I_C = -10$ mA
Gain Bandwidth Product	f_T	250	400		MHz	$V_{CE} = -10$ V, $I_E = 1.0$ mA
Output Capacitance	C_{ob}		1.1	2.0	pF	$V_{CB} = -10$ V, $I_E = 0$, $f = 1.0$ MHz
Noise Figure	NF		3.5		dB	$V_{CE} = -10$ V, $I_C = -1.0$ mA $R_G = 500 \Omega$, $f = 1.0$ MHz

h_{FE} Classification

Marking	E2	E3	E4
h_{FE2}	40 to 80	60 to 120	90 to 180

TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)