

DESCRIPTION The 2SA1626 is designed for general purpose amplifier and high speed switching applications.

FEATURES

- **High Voltage.**
- **High Speed Switching.**
- **Low Collector Saturation Voltage.**

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures

Storage Temperature —55 to +150 °C

Junction Temperature 150 °C Maximum

Maximum Power Dissipation ($T_a = 25^\circ\text{C}$)

Total Power Dissipation 1.0 W

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

V_{CBQ} Collector to Base Voltage -400 V

V_{CEQ} Collector to Emitter Voltage -400 V

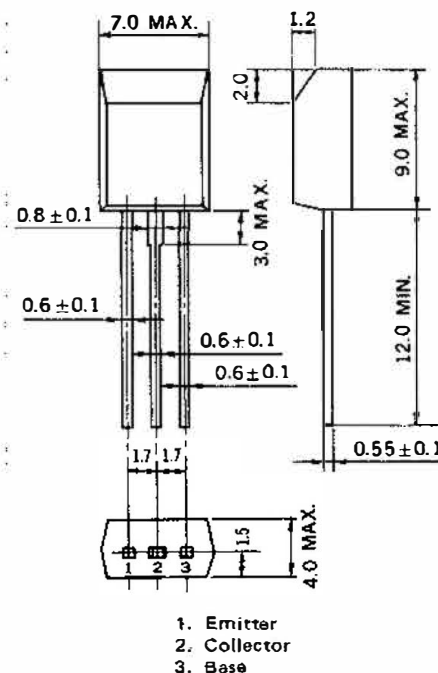
V_{EB0} Emitter to Base Voltage -7.0 V

I_C **Collector Current (DC), -2.0 A**

I_C	Collector Current (pulse)*	-4.0	A
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* PW $\leq$ 10 ms, Duty Cycle $\leq$ 50 %

PACKAGE DIMENSIONS



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

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h_{FE1}^{**}	DC Current Gain	40	60	120	—	$V_{CE} = -5.0 \text{ V}, I_C = -0.1 \text{ A}$
h_{FE2}^{**}	DC Current Gain	6	22	—	—	$V_{CE} = -5.0 \text{ V}, I_C = -1.0 \text{ A}$
f_T	Gain Bandwidth Product	10	40	—	MHz	$V_{CE} = -10 \text{ V}, I_E = 0.1 \text{ A}$
C_{ob}	Output Capacitance	—	30	40	pF	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1.0 \text{ MHz}$
I_{CBO}	Collector Cutoff Current	—	—	-10	μA	$V_{CB} = -400 \text{ V}, I_E = 0$
I_{EBO}	Emitter Cutoff Current	—	—	-10	μA	$V_{EB} = -5.0 \text{ V}, I_C = 0$
$V_{CE(sat)}^{**}$	Collector Saturation Voltage	—	-0.25	-0.5	V	$I_C = -0.5 \text{ A}, I_B = -0.1 \text{ A}$
$V_{BE(sat)}^{**}$	Base Saturation Voltage	—	-0.85	-1.2	V	$I_C = -0.5 \text{ A}, I_B = -0.1 \text{ A}$
t_{on}	Turn On Time	—	0.03	0.5	μs	$\left\{ \begin{array}{l} I_C = -1.0 \text{ A}, R_L = 150 \Omega \\ I_{B1} = -I_{B2} = -0.2 \text{ A} \\ V_{CC} = -150 \text{ V} \end{array} \right.$
t_{stg}	Storage Time	—	1.4	2.0	μs	
t_f	Fall Time	—	0.1	0.7	μs	

** Pulsed PW $\leq 350 \mu\text{s}$, Duty Cycle $\leq 2\%$

Classification of h_{FE1}

Rank	L	K
Range	40 to 80	60 to 120

Test Conditions: $V_{CE} = -5.0 \text{ V}$, $I_C = -0.1 \text{ A}$

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