DATA SHEET

NEC
ELECTRON DEVICE

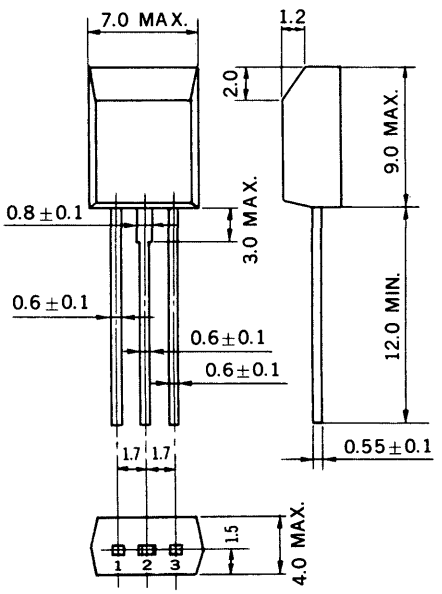
PNP SILICON TRANSISTOR
2SA1626

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

FEATURES

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

PACKAGE DIMENSIONS
in millimeters



1. Emitter
2. Collector
3. Base

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures

- Storage Temperature . . . . . −55 to +150 °C
- Junction Temperature . . . . . 150 °C Maximum

Maximum Power Dissipation (T_a = 25 °C)

- Total Power Dissipation . . . . . 1.0 W

Maximum Voltages and Currents (T_a = 25 °C)

- V_{CBO} Collector to Base Voltage . . . . . −400 V
- V_{CEO} Collector to Emitter Voltage . . . . . −400 V
- V_{EBO} Emitter to Base Voltage . . . . . −7.0 V
- I_C Collector Current (DC) . . . . . −2.0 A
- I_C Collector Current (pulse)* . . . . . −4.0 A

* PW ≦ 10 ms, Duty Cycle ≦ 50 %

ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

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

** Pulsed PW ≦ 350 μs, Duty Cycle ≦ 2 %

Classification of h_{FE1}

Rank	L	K
Range	40 to 80	60 to 120

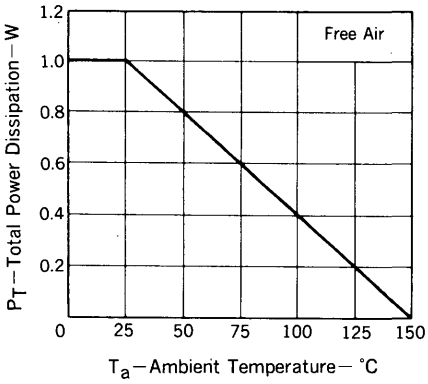
Test Conditions: V_{CE} = −5.0 V, I_C = −0.1 A

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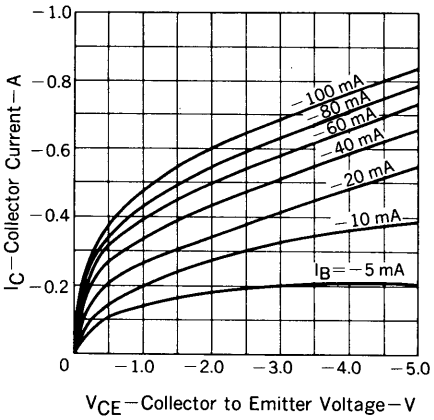
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TYPICAL CHARACTERISTICS (T_a = 25 °C)

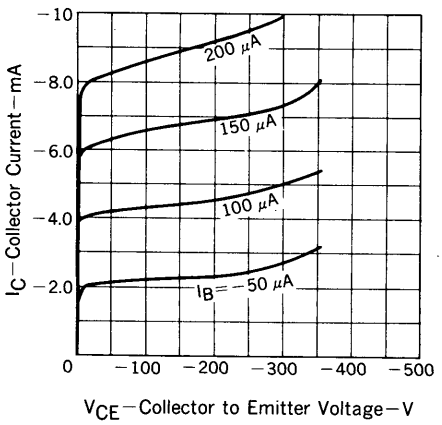
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



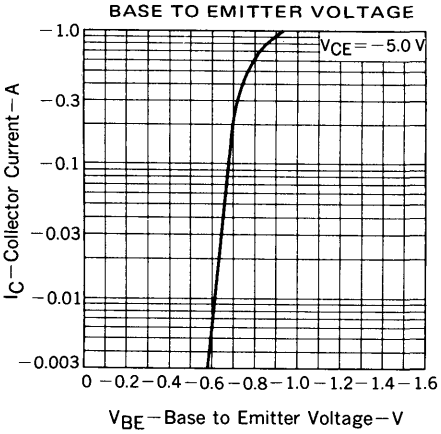
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



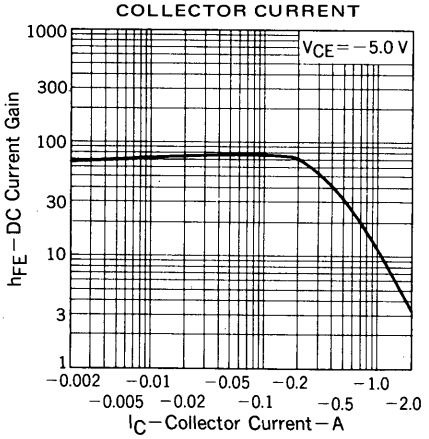
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



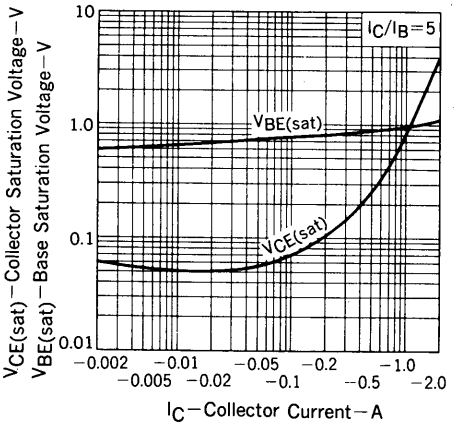
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



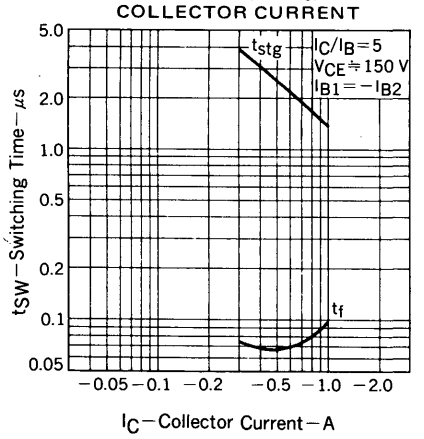
DC CURRENT GAIN vs. COLLECTOR CURRENT



COLLECTOR AND BASE SATURATION VOLTAGE vs. COLLECTOR CURRENT



TURN-OFF TIME vs. COLLECTOR CURRENT



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