

PNP SILICON TRANSISTOR
2SA1625

DESCRIPTION

The 2SA1625 is designed for general purpose amplifier and high speed switching applications.

FEATURES

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

QUALITY GRADE

Standard

Please refer to "Quality grade on NEC Semiconductor Devices" (Document number IEI-1209) published by NEC Corporation to know the specification of quality grade on the devices and its recommended applications.

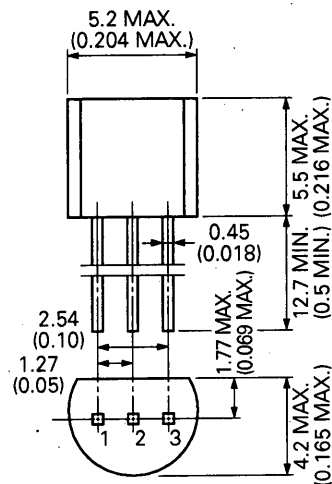
ABSOLUTE MAXIMUM RATINGS (T_a = 25 °C)

Collector to Base Voltage	V _{CBO}	-400	V
Collector to Emitter Voltage	V _{CEO}	-400	V
Emitter to Base Voltage	V _{EBO}	-7.0	V
Collector Current (DC)	I _c	-0.5	A
Collector Current (pulse)*	I _c	-1.0	A
Total Power Dissipation	P _T	750	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

* PW ≤ 2 ms, Duty Cycle ≤ 50 %

PACKAGE DIMENSIONS

in millimeters (inches)



- | | | |
|--------------|-------|----------|
| 1. EMITTER | EIAJ | : SC-43B |
| 2. COLLECTOR | JEDEC | : TO-92 |
| 3. BASE | IEC | : PA33 |

ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

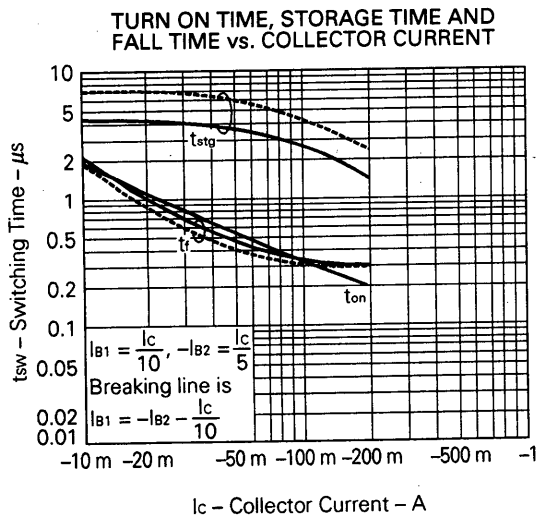
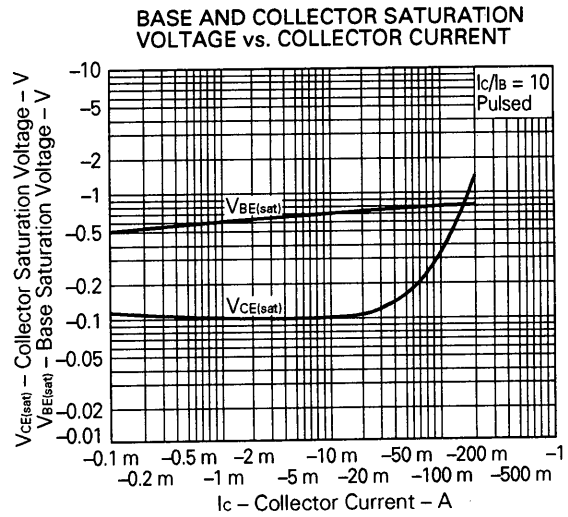
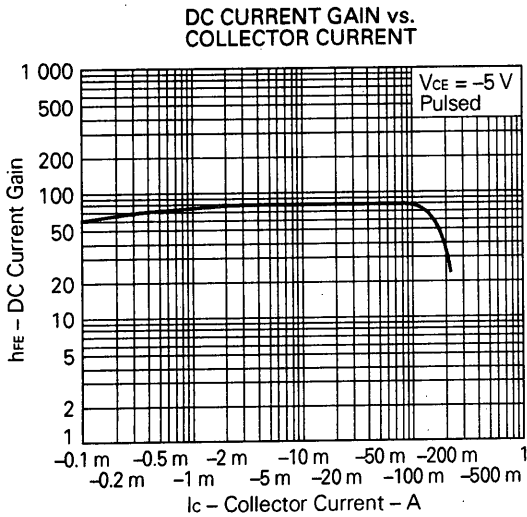
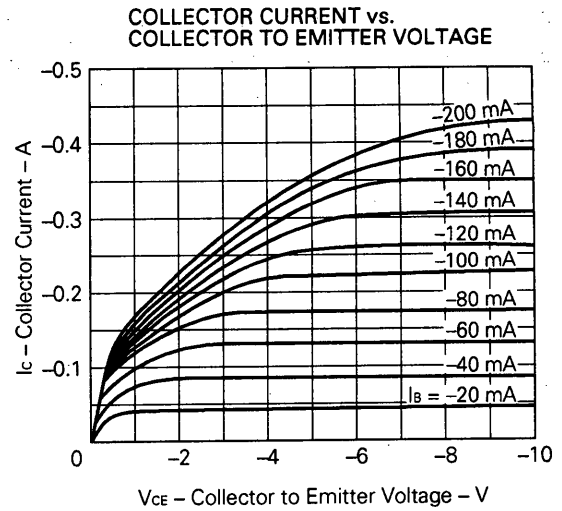
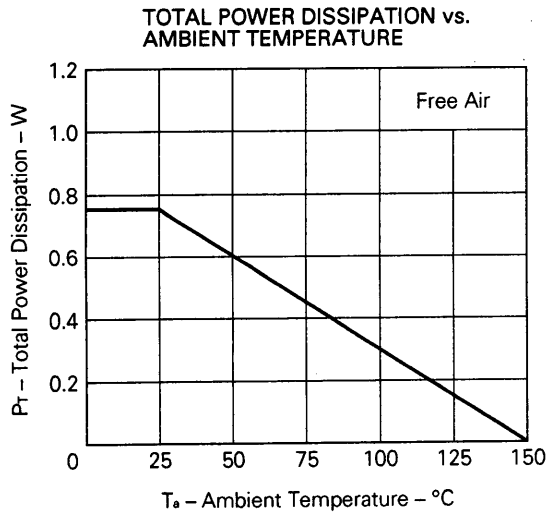
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Turn-on Time	t _{on}		0.3	1.0	μs	I _c = -100 mA, R _L = 1.5 kΩ, I _{B1} = -10 mA, I _{B2} = 10 mA, V _{CC} = -150 V PW = 50 μs, Duty Cycle ≤ 2 %
Storage Time	t _{stg}		4.0	5.0	μs	
Fall-Time	t _f		0.3	1.0	μs	
Gain Bandwidth Product	f _r	20	40		MHz	V _{CE} = -10 V, I _E = 10 mA
Output Capacitance	C _{ob}		17	20	pF	V _{CB} = -10 V, I _E = 0, f = 1 MHz
DC Current Gain	h _{FE} **	40	80	200	—	V _{CE} = -5.0 V, I _c = -50 mA
Collector Saturation Voltage	V _{CE(sat)**}		0.35	0.5	V	I _c = -0.1 A, I _B = -10 mA
Base Saturation Voltage	V _{BE(sat)**}		-0.80	-1.2	V	I _c = -0.1 A, I _B = -10 mA
Collector Cutoff Current	I _{CBO}			10	μA	V _{CB} = -400 V, I _E = 0
Emitter Cutoff Current	I _{EBO}			10	μA	V _{EB} = -5.0 V, I _c = 0
Collector to Emitter Voltage	V _{CEO}	-400			V	I _c = -1.0 mA, R _{BE} = ∞

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

Classification of h_{FE}

Rank	M	L	K
Range	40 to 80	60 to 120	100 to 200

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



REFERENCE APPLICATION NOTE

ASSEMBLY MANUAL FOR SEMICONDUCTOR DEVICES	IEI-1207
QUALITY CONTROL OF NEC SEMICONDUCTOR DEVICES	TEI-1202
QUALITY CONTROL GUIDE OF SEMICONDUCTOR DEVICES	MEI-1202

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Application examples recommended by NEC Corporation.

Standard: Computer, Office equipment, Communication equipment, Test and Measurement equipment, Machine tools, Industrial robots, Audio and Visual equipment, Other consumer products, etc.

Special: Automotive and Transportation equipment, Traffic control systems, Antidisaster systems, Anticrime systems, etc.

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