

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.

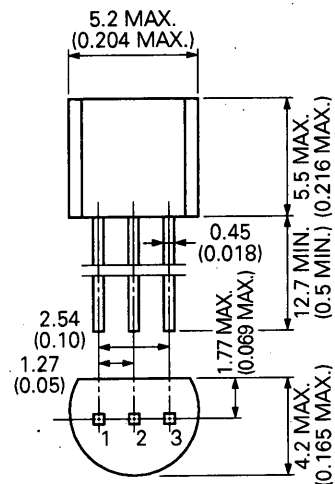
ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Collector to Base Voltage	V_{CB0}	-400	V
Collector to Emitter Voltage	V_{CE0}	-400	V
Emitter to Base Voltage	V_{EB0}	-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	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* $PW \leq 2 \text{ ms}$, Duty Cycle $\leq 50 \%$

PACKAGE DIMENSIONS

in millimeters (inches)



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

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

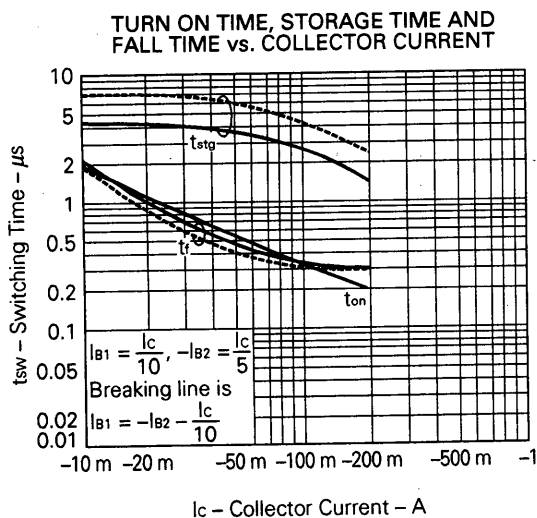
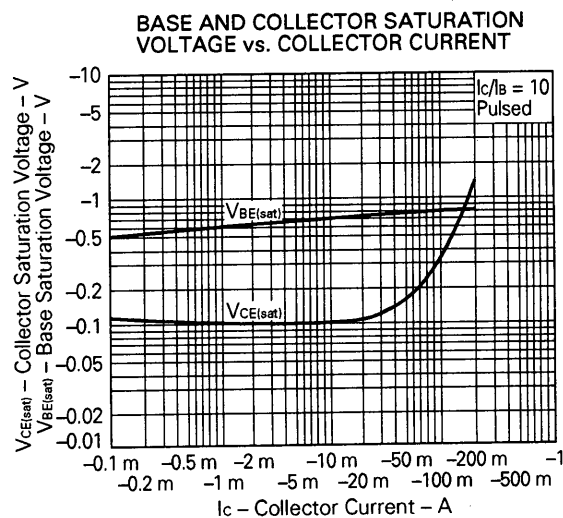
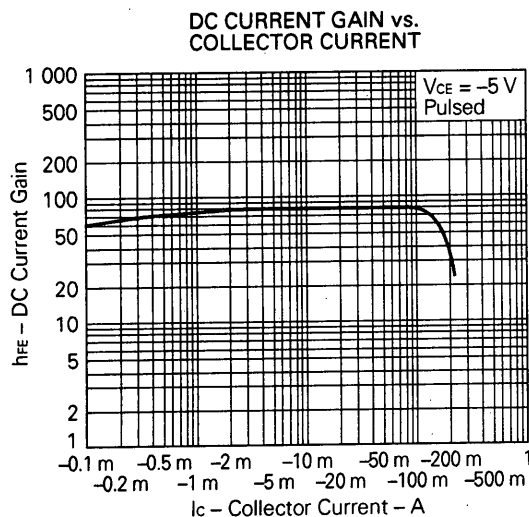
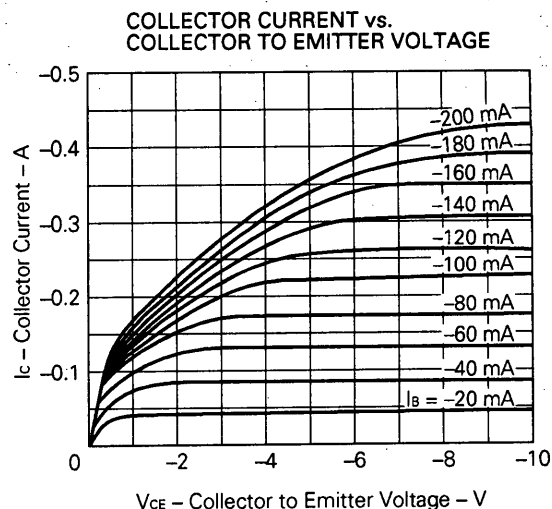
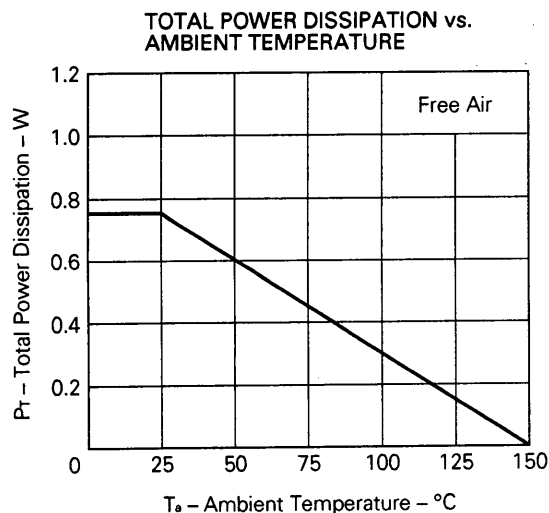
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Turn-on Time	t_{on}		0.3	1.0	μs	$I_c = -100\text{ mA}$, $R_L = 1.5\text{ k}\Omega$, $I_{B1} = -10\text{ mA}$, $I_{B2} = 10\text{ mA}$, $V_{CC} \approx -150\text{ V}$ $PW = 50\text{ }\mu\text{s}$, Duty Cycle $\leq 2\%$
Storage Time	t_{stg}		4.0	5.0	μs	
Fall-Time	t_f		0.3	1.0	μs	
Gain Bandwidth Product	f_r	20	40		MHz	$V_{CE} = -10\text{ V}$, $I_E = 10\text{ mA}$
Output Capacitance	C_{ob}		17	20	pF	$V_{CB} = -10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$
DC Current Gain	h_{FE}^{**}	40	80	200	—	$V_{CE} = -5.0\text{ V}$, $I_c = -50\text{ mA}$
Collector Saturation Voltage	$V_{CE(sat)}^{**}$		0.35	0.5	V	$I_c = -0.1\text{ A}$, $I_B = -10\text{ mA}$
Base Saturation Voltage	$V_{BE(sat)}^{**}$		-0.80	-1.2	V	$I_c = -0.1\text{ A}$, $I_B = -10\text{ mA}$
Collector Cutoff Current	I_{CBO}			10	μA	$V_{CB} = -400\text{ V}$, $I_E = 0$
Emitter Cutoff Current	I_{EBO}			10	μA	$V_{EB} = -5.0\text{ V}$, $I_c = 0$
Collector to Emitter Voltage	V_{CEO}	-400			V	$I_c = -1.0\text{ mA}$, $R_{BE} = \infty$

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

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.