

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.

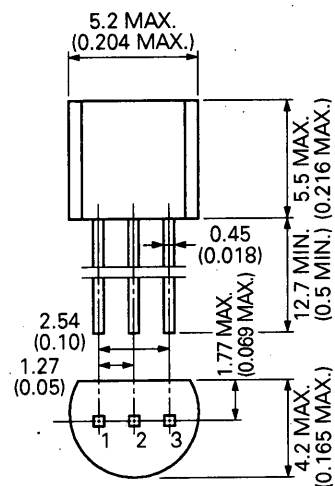
ABSOLUTE MAXIMUM RATINGS (T_a = 25 °C)

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

* $PW \leq 2 \text{ ms}$, 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 ($T_a = 25\text{ }^{\circ}\text{C}$)

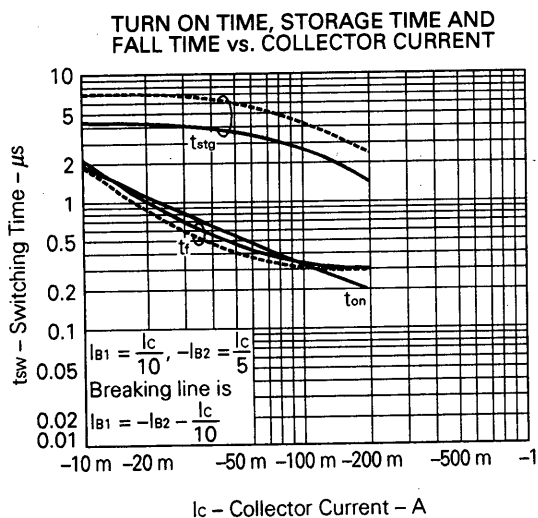
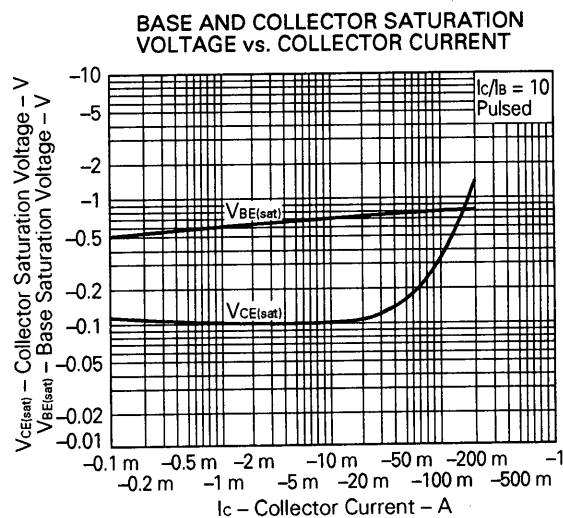
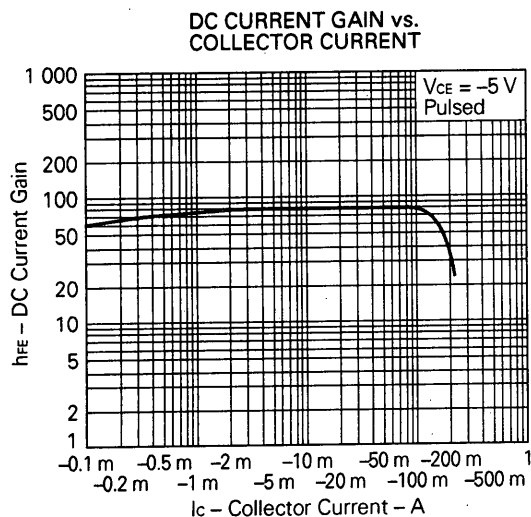
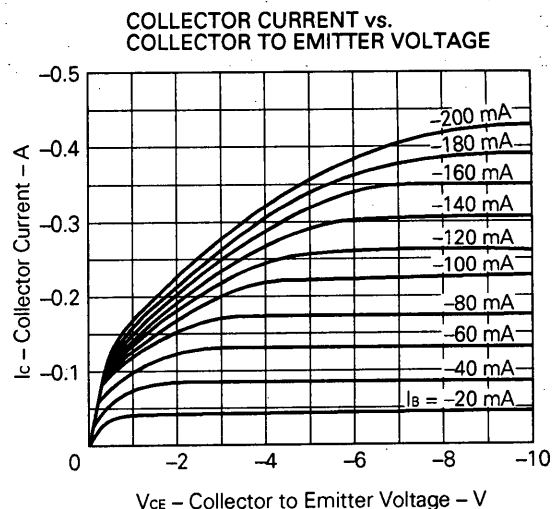
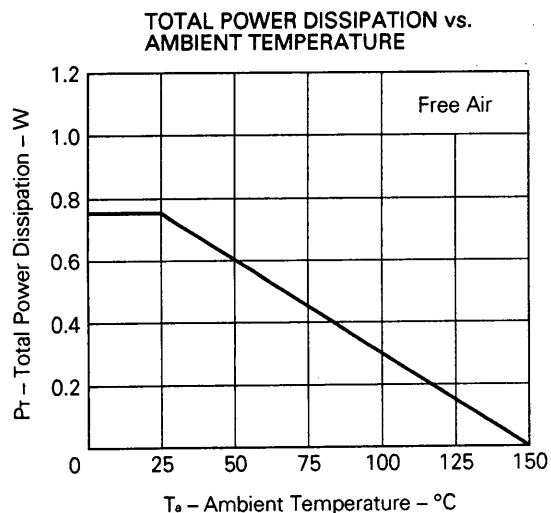
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Turn-on Time	t_{on}		0.3	1.0	μs	$I_c = -100\text{ mA}$, $R_L = 1.5\text{ k}\Omega$, $I_{B1} = -10\text{ mA}$, $I_{B2} = 10\text{ mA}$, $V_{CC} \div -150\text{ V}$ $PW = 50\text{ }\mu\text{s}$, Duty Cycle $\leq 2\%$
Storage Time	t_{stg}		4.0	5.0	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

No part of this document may be copied or reproduced in any form or by any means without the prior written consent of NEC Corporation. NEC Corporation assumes no responsibility for any errors which may appear in this document.

NEC Corporation does not assume any liability for infringement of patents, copyrights or other intellectual property rights of third parties by or arising from use of a device described herein or any other liability arising from use of such device. No license, either express, implied or otherwise, is granted under any patents, copyrights or other intellectual property rights of NEC Corporation or others.

The devices listed in this document are not suitable for use in aerospace equipment, submarine cables, nuclear reactor control systems and life support systems. If customers intend to use NEC devices for above applications or they intend to use "Standard" quality grade NEC devices for applications not intended by NEC, please contact our sales people in advance.

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.