

GSD1624 NPN EPITAXIAL PLANAR SILICON TRANSISTOR

HIGH CURRENT SWITCHING APPLICATION

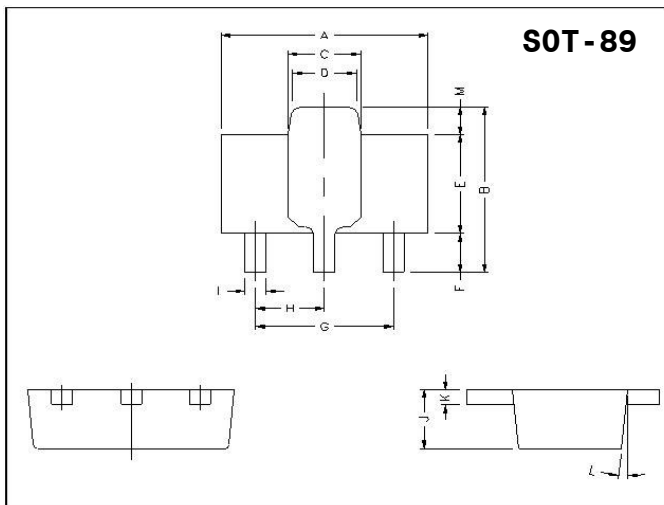
Description

The GSD1624 applies to voltage regulators, relay drivers, lamp drivers, and electrical equipment .

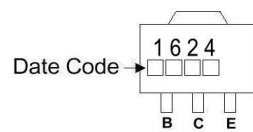
FEATURES

- *Adoption of FBET, MBIT processes
- *Low collector-to-emitter saturation voltage
- *Fast switching speed
- *Large current capacity and wide ASO

Package Dimension



Marking :



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.4	4.6	G	3.00	REF.
B	4.05	4.25	H	1.50	REF.
C	1.50	1.70	I	0.40	0.52
D	1.30	1.50	J	1.40	1.60
E	2.40	2.60	K	0.35	0.41
F	0.89	1.20	L	5°	TYP.
			M	0.70	REF.

Absolute Maximum Ratings (Ta=25°C, unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	VCBO	60	V
Collector to Emitter Voltage	VCEO	50	V
Emitter to Base Voltage	VEBO	6	V
Collector Current (DC)	IC	3	A
Collector Current (PULSE)(note1)	IC	6	A
Total Power Dissipation	PD	0.5	W
Junction Temperature	Tj	+150	°C
Storage Temperature	Tstg	-55 ~ +150	°C

Note 1: Single pulse, PW=10ms

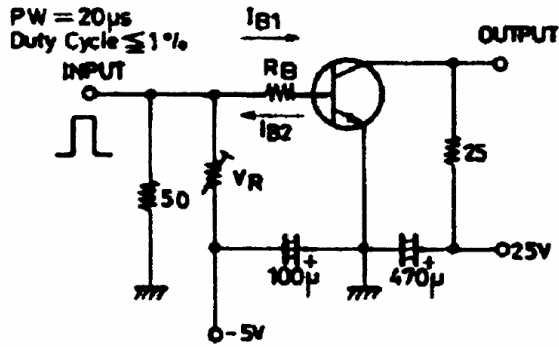
ELECTRICAL Characteristics (Ta=25°C, unless otherwise specified)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
V(BR)CBO	60	-	-	V	IC=10uA, IE=0
V(BR)CEO	50	-	-	V	IC=1 mA, RBE=∞
V(BR)EBO	6	-	-	V	IE=10uA, IC=0
ICBO	-	-	1	uA	VCB=40V
IEBO	-	-	1	uA	VEB=4V
VCE(sat)	-	0.19	0.5	V	IC=2A, IB=100mA
VBE(sat)	-	0.94	1.2	V	IC=2A, IB=100mA
hFE	100	-	560	-	VCE=2V, IC=0.1A
fT	-	150	-	MHz	VCE=10V, IC=50mA
Cob	-	25	-	pF	VCB=10V, f=1MHz
tstg	-	650	-	ns	See test circuit
tf	-	35	-	ns	See test circuit

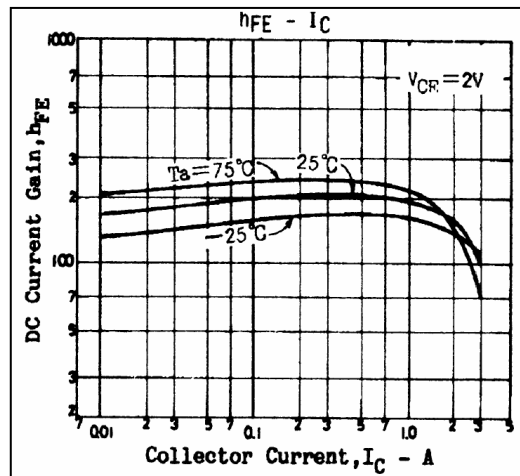
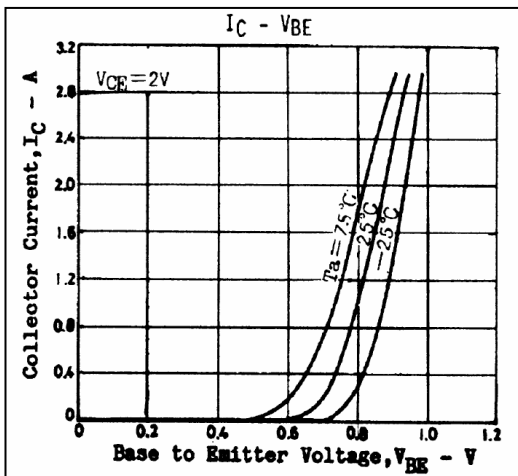
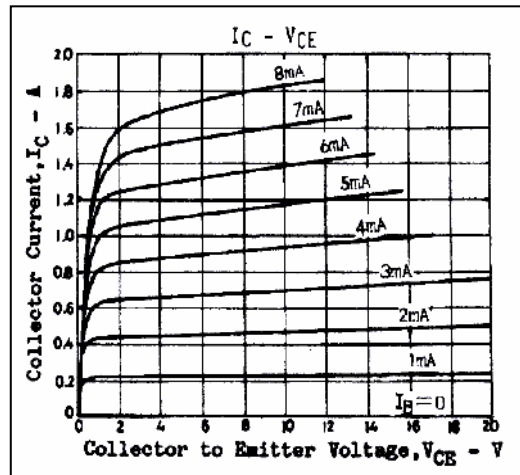
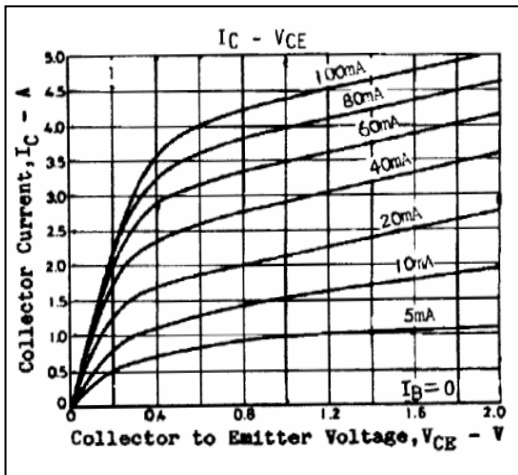
CLASSIFICATION OF Hfe

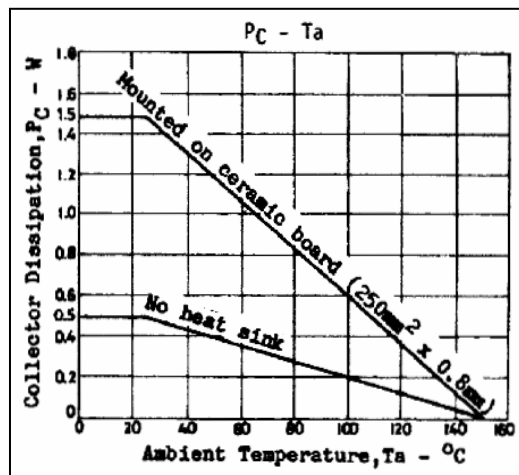
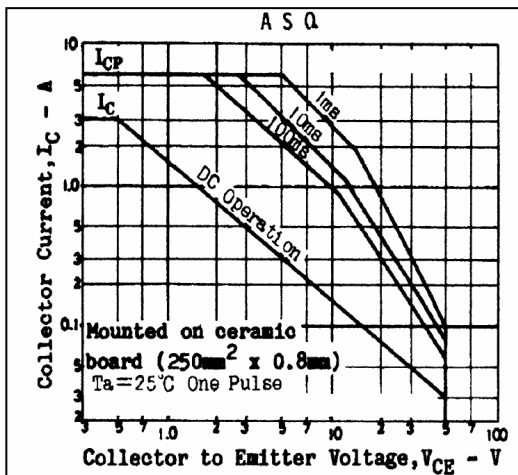
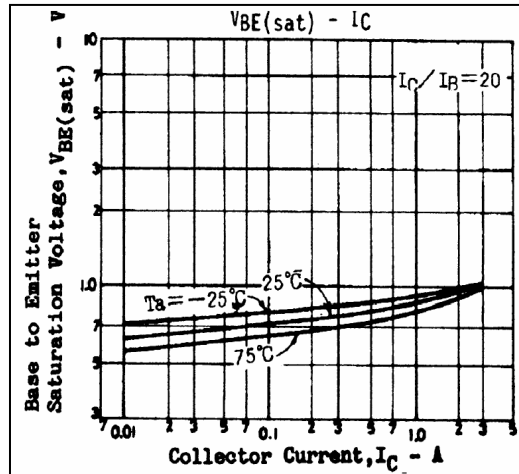
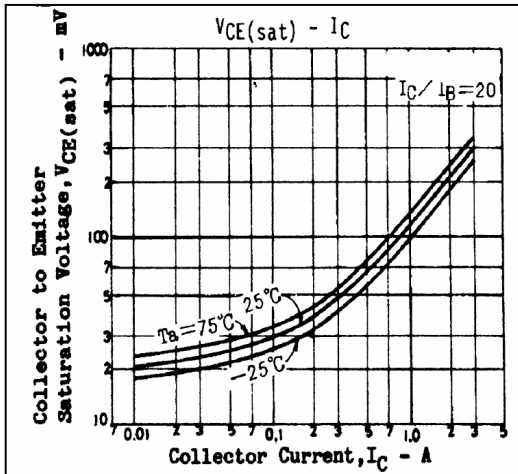
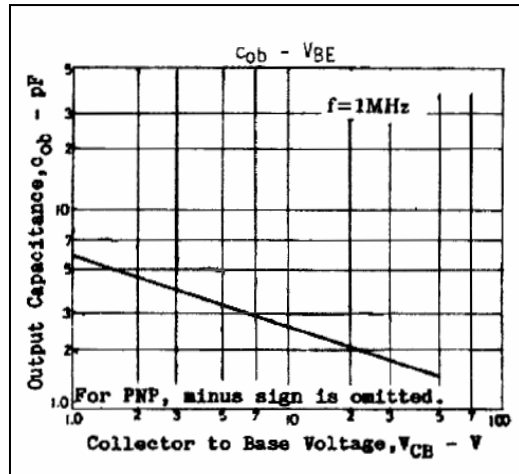
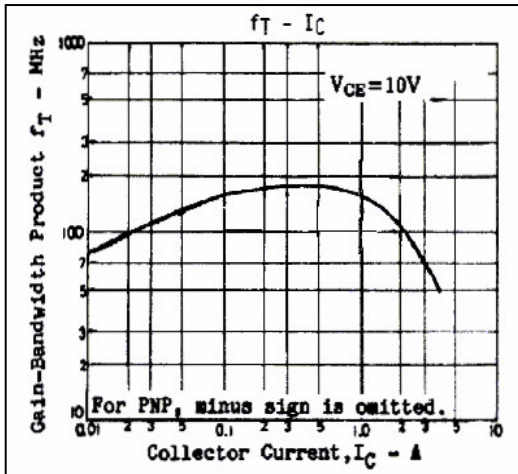
RANK	R	S	T	U
RANGE	100-200	140-280	200-400	280-560

TEST CIRCUIT (Unit: resistance: Ω , capacitance: F)



$$I_C = 10 I_{B1} = -10 I_{B2} = 1A$$





Important Notice:

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of GTM.
- GTM reserves the right to make changes to its products without notice.
- GTM semiconductor products are not warranted to be suitable for use in life-support Applications, or systems.
- GTM assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.

Head Office And Factory:

• **Taiwan:** No. 17-1 Tatung Rd. Fu Kou Hsin-Chu Industrial Park, Hsin-Chu, Taiwan, R. O. C.
 TEL : 886-3-597-7061 FAX : 886-3-597-9220, 597-0785
 • **China:** (201203) No.255, Jang-Jiang Tsai-Lueng RD. , Pu-Dung-Hsin District, Shang-Hai City, China
 TEL : 86-21-5895-7671 FAX : 86-21-38950165