

SANYO

No.688G

2SB827/2SD1063

PNP/NPN Epitaxial Planar Silicon Transistors

50V/7A Switching Applications

Use : Universal high current switching as solenoid driving, high speed inverter and converter.

Features :

- Low saturation voltage : $V_{CE(sat)} = (-) 0.4V$ max.
- Wide ASO.

() shows the case of 2SB827 only.

Absolute Maximum Ratings at $T_a = 25^\circ C$

Collector-to-Base Voltage	V_{CBO}	(-) 60	V
Collector-to-Emitter Voltage	V_{CEO}	(-) 50	V
Emitter-to-Base Voltage	V_{EBO}	(-) 6	V
Collector Current	I_C	(-) 7	A
Collector Current(Pulse)	I_{CP}	(-) 14	A
Collector Dissipation	P_C	$T_C = 25^\circ C$	60 W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

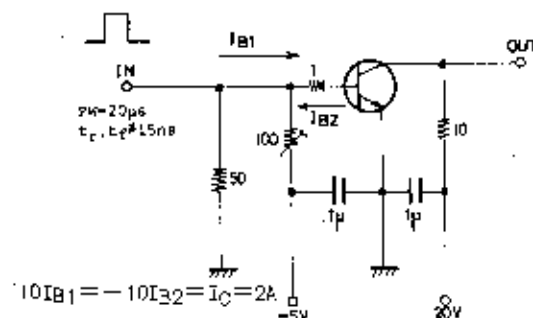
Electrical Characteristics at $T_a = 25^\circ C$

			min	typ	max	unit
Collector Cut off Current	I_{CBO}	$V_{CB} = (-) 40V, I_E = 0$		(-) 0.1		mA
Emitter Cut off Current	I_{EBO}	$V_{EB} = (-) 4V, I_C = 0$		(-) 0.1		mA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = (-) 2V, I_C = (-) 1A$	70*		280*	
	$h_{FE}(2)$	$V_{CE} = (-) 2V, I_C = (-) 5A$	30			
Gain Bandwidth Product	f_T	$V_{CE} = (-) 5V, I_C = (-) 1A$		10		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-) 4A, I_B = (-) 0.4A$		(-) 0.4		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-) 1mA, I_E = 0$	(-) 60			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-) 1mA, R_{BE} = \infty$	(-) 50			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-) 1mA, I_C = 0$	(-) 6			V
Turn-on Time	t_{on}	At the test circuit		0.2		μs
Fall Time	t_f	At the test circuit	(0.1) 0.3			μs
Storage Time	t_{stg}	At the test circuit	(0.7) 0.9			μs

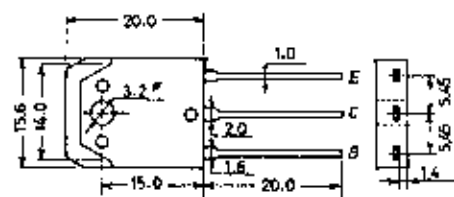
*The 2SB827/2SD1063 are classified by h_{FE} as follows:

70	Q	140	100	R	200	140	S	280
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Switching Time Test Circuit



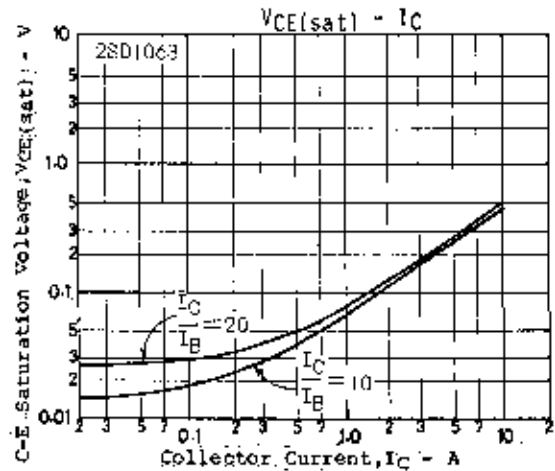
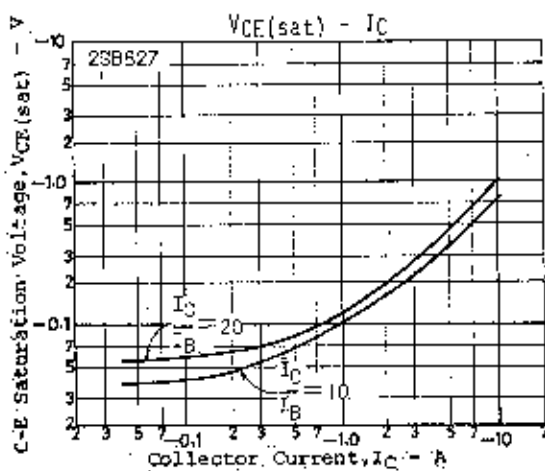
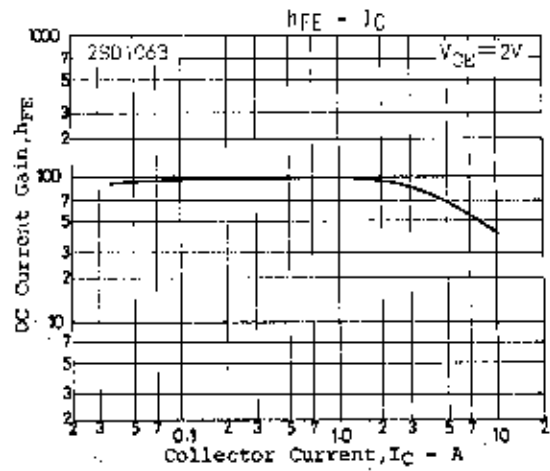
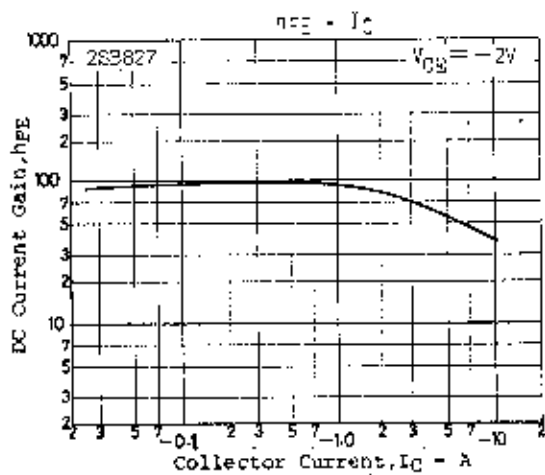
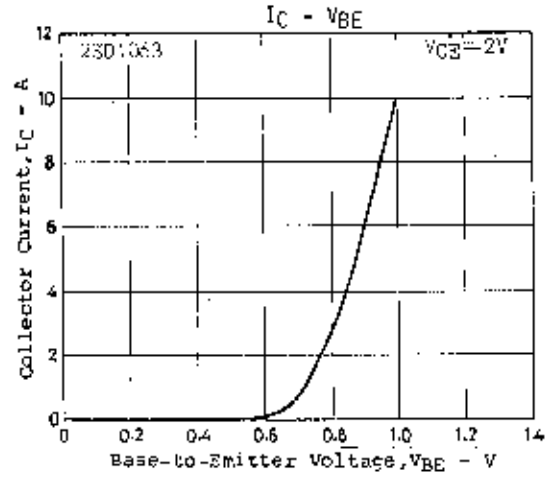
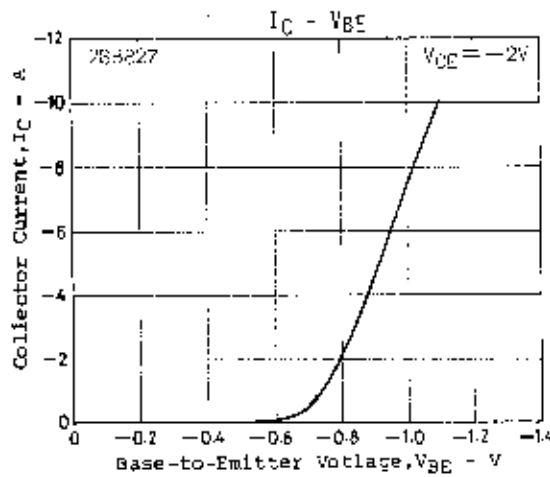
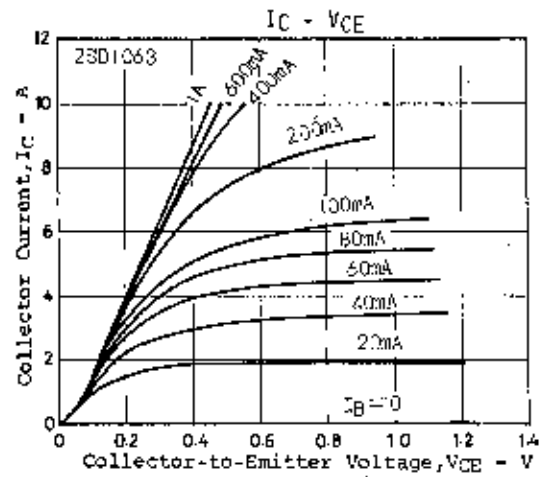
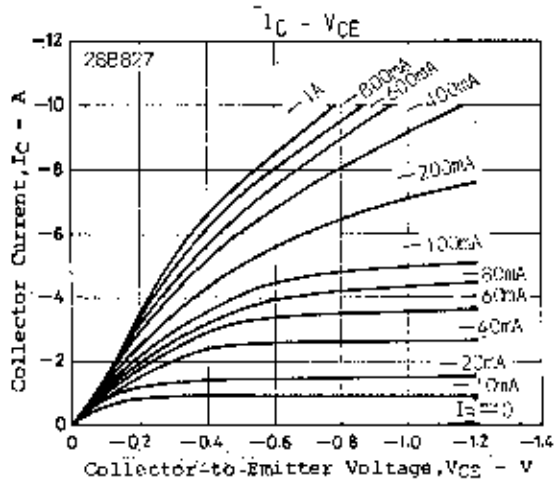
(For PNP, the polarity is reversed.)

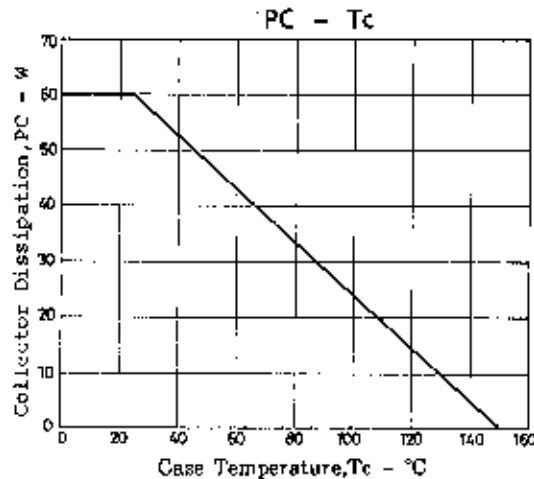
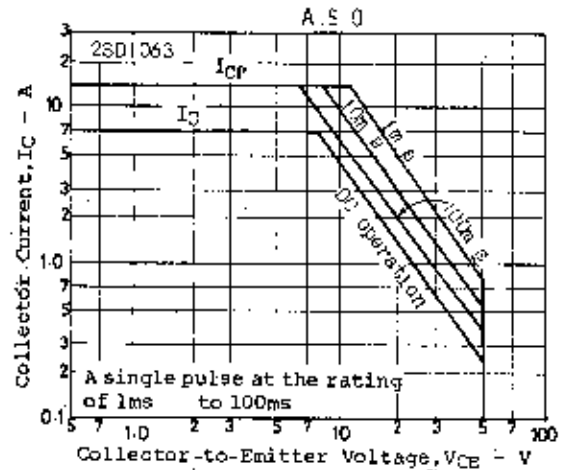
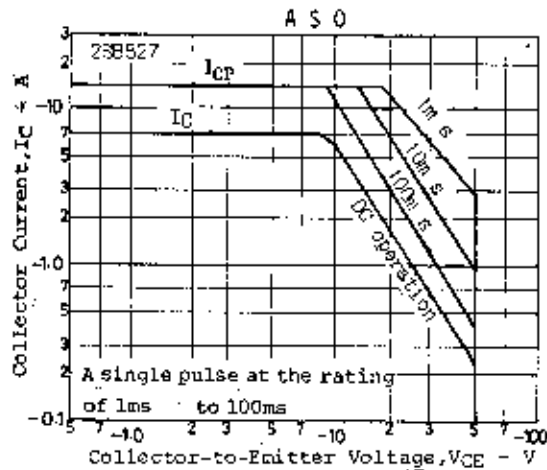
Unit (Resistance : Ω , Capacitance : F)Package Dimensions 2022
(unit:mm)

E: Emitter
C: Collector
B: Base
SANYO: TO3PB

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