

**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	$^\circ C$

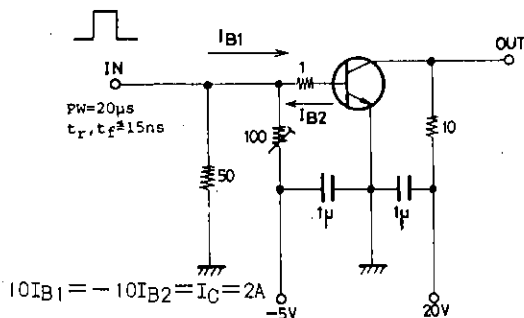
Electrical Characteristics at  $T_a = 25^\circ C$

			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		$\mu s$
Fall Time	$t_f$	At the test circuit	(0.1)0.3			$\mu s$
Storage Time	$t_{stg}$	At the test circuit	(0.7)0.9			$\mu s$

\*:The 2SB827/2SD1063 are classified by  $1A h_{FE}$  as follows:

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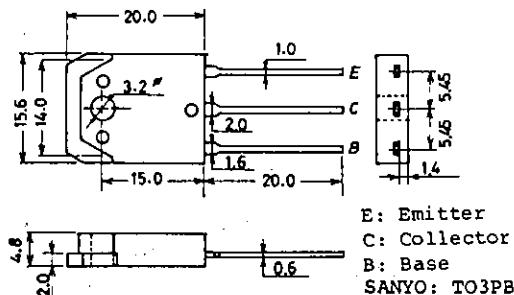
Switching Time Test Circuit



(For PNP, the porality is reversed.)

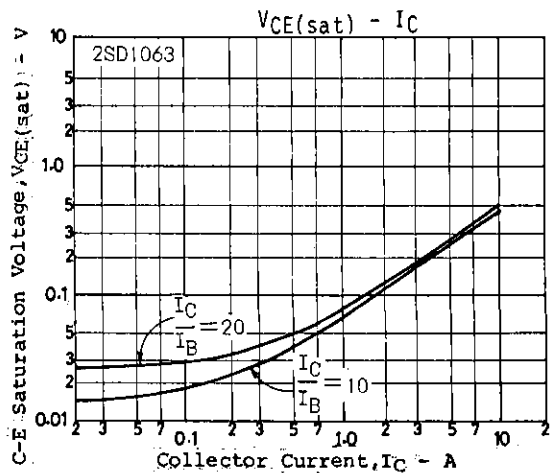
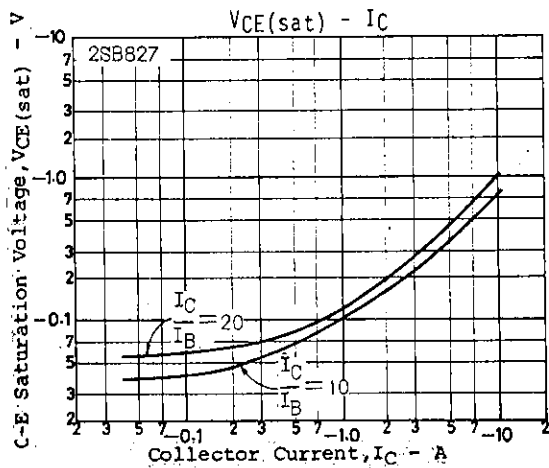
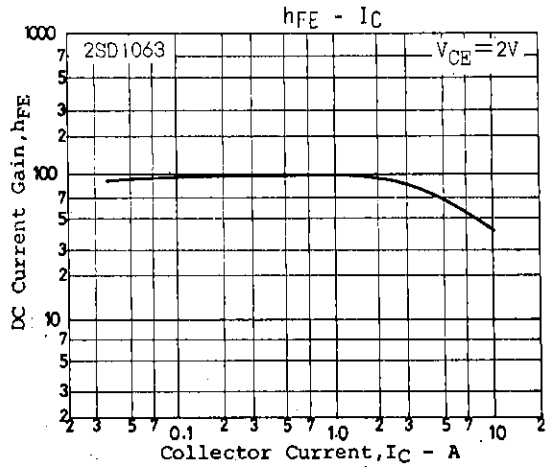
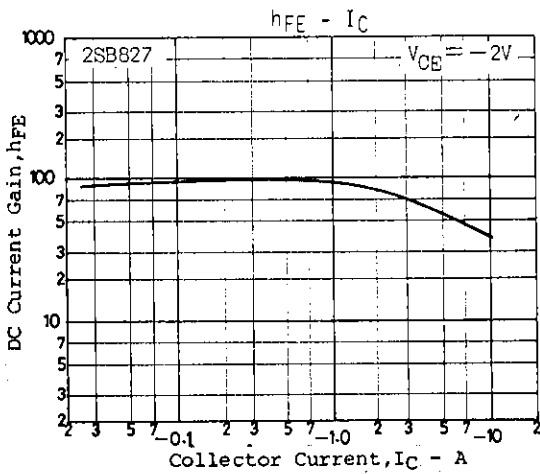
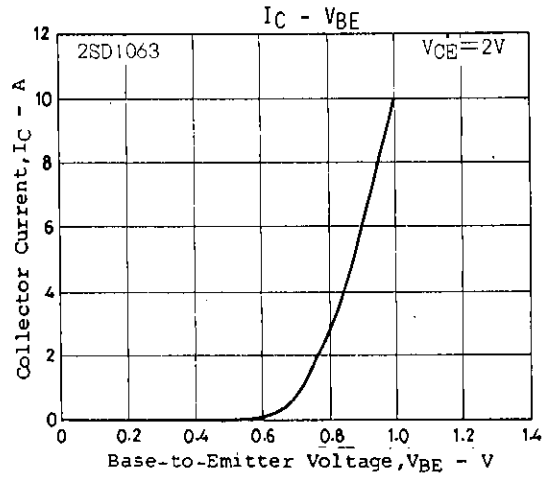
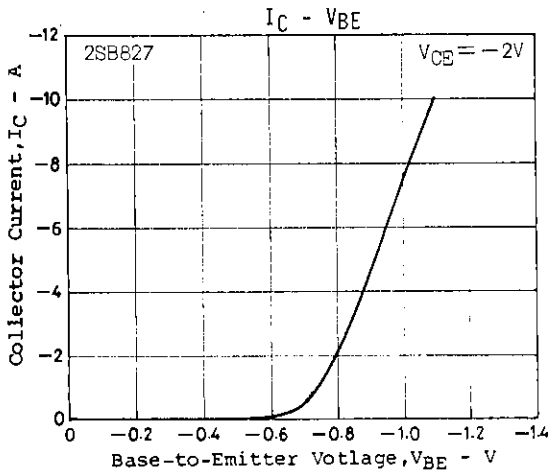
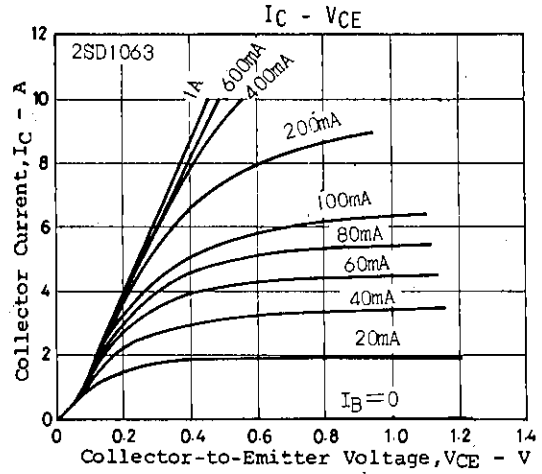
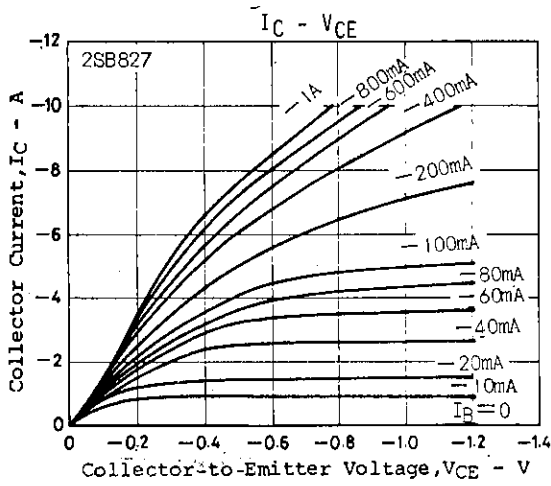
Unit (Resistance :  $\Omega$ , Capacitance : F)

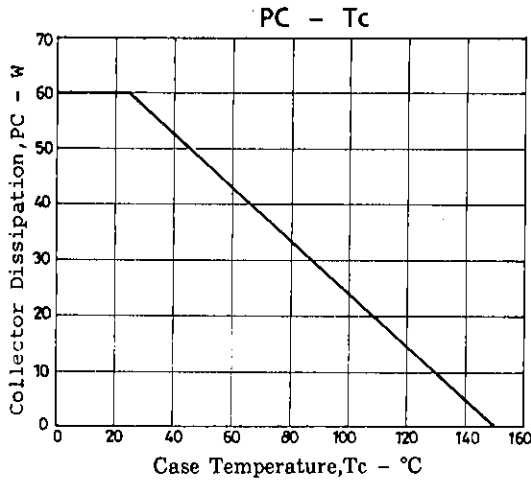
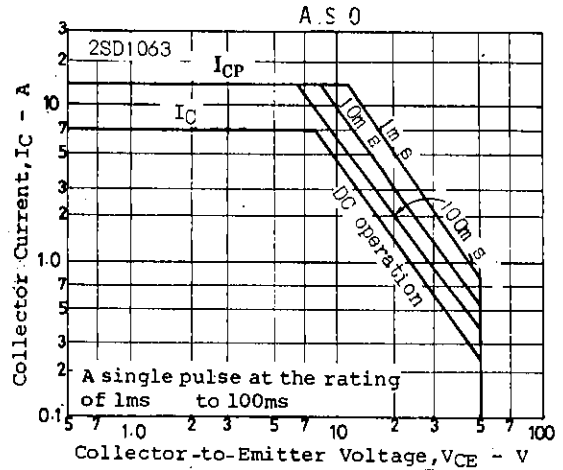
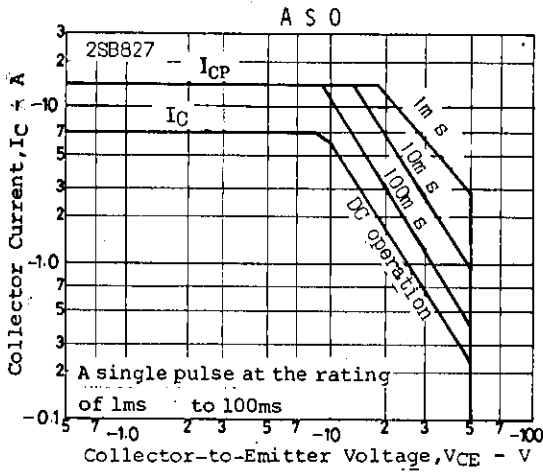
Package Dimensions 2022  
(unit:mm)



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