

2SB827/2SD1063

50V/7A Switching Applicationsa

Applications

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

Features

- · Low collector-to-emitter saturation voltage :

(): 2SB827

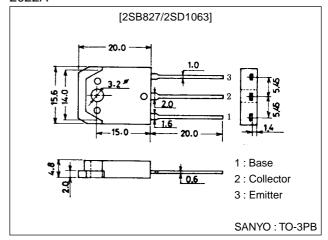
$V_{CE(sat)} = (-)0.4V$ max.

· Wide ASO.

Package Dimensions

unit:mm

2022A



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
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	Ic		(-)7	Α
Collector Current (Pulse)	I _{CP}		(–)14	А
Collector Dissipation	PC	Tc=25°C	60	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Oill
Collector Cutoff Current	I _{CBO}	V _{CB} =(-)40V, I _E =0			(-)0.1	mA
Emitter Cutoff 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
Collector-to-Emitter Saturation Voltage	VCE(sat)	I _C =(-)4A, I _B =(-)0.4A			(-)0.4	V

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

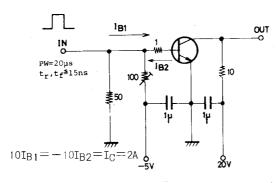
70 Q 140 100 R 200 140 S) Q	140 1	00 R	200	140	S	280
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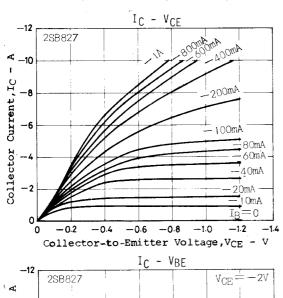
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max) UIIII
Collector-to-Base Breakdown Voltage	V _(BR) CBO	I _C =(-)1mA, I _E =0	(–)60			V
Collector-to-Emitter Breakdown Voltage	V _(BR) CEO	I _C =(-)1mA, R _{BE} =∞	(–)50			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =(-)1mA, I _C =0	(–)6			V
Turn-ON Time	ton	See specified test circuit.		0.2		μs
Fall Time	t _f	See specified test circuit.		(0.1)		μs
				0.3		μs
Storage Time	t _{stg}	See specified test circuit.		(0.7)		μs
				0.9		μs

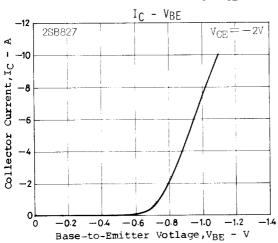
Switching Time Test Circuit

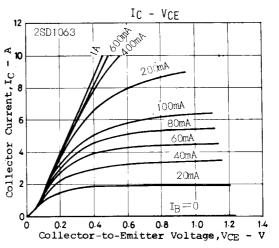


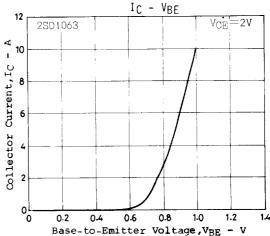
(For PNP, the porality is reversed.)

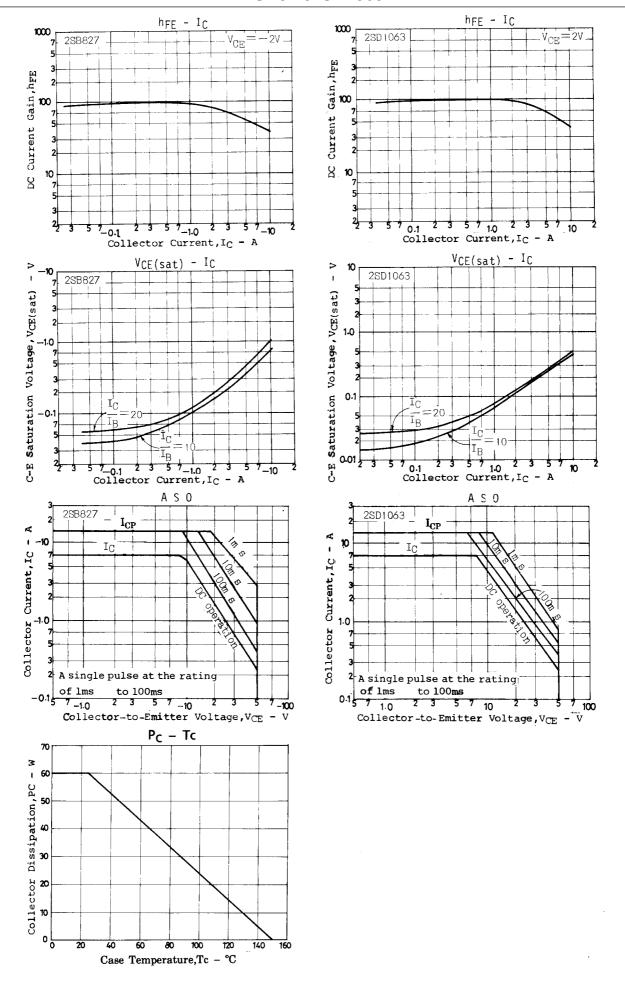
Unit (resistance : Ω, capacitance : F)











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