

2SB828/2SD1064

50V/12A Switching Applications

Applications

· Relay drivers, high-speed inverters, converters, and other general high-current switching applications.

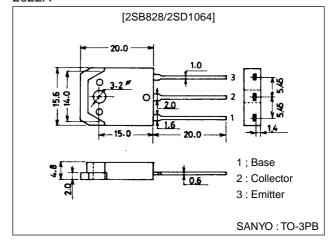
Features

- \cdot Low-saturation collector-to-emitter voltage : V_CE(sat)=-0.5V(PNP), 0.4V(NPN) max.
- · Wide ASO leading to high resistance to breakdown.

Package Dimensions

unit:mm

2022A



(): 2SB828

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		(-)12	Α
Collector Current (Pulse)	I _{CP}		(–)17	Α
Collector Dissipation	PC	Tc=25°C	80	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions		Ratings		
	Symbol		min	typ	max	Unit
Collector Cutoff Current	ICBO	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 =(-)6A, I _B =(-)0.3A			0.4	V
					(-0.5)	V

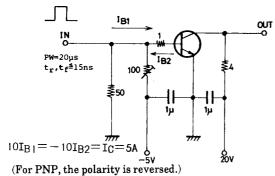
 $[\]ast$: The 2SB828/2SD1064 are classified by 1A h_{FE} as follows :

70 Q 140	100 R 200	140 S 280
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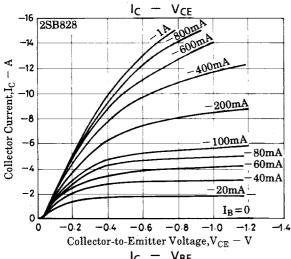
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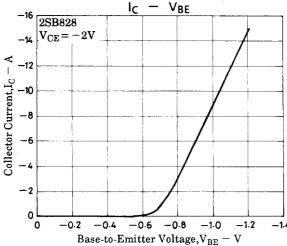
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	V(BR)CBO	I _C =(-)1mA, I _E =0	(–)60			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =(−)1mA, R _{BE} =∞	(–)50			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I _E =(-)1mA, I _C =0	(–)6			V
Turn-ON Time	ton	See specified Test Circuit		(0.2)		μs
				0.1		μs
Fall Time	t _f	See specified Test Circuit		(0.4)		μs
				1.2		μs
Storage Time	t _{stg}	See specified Test Circuit		(0.1)		μs
				0.05		μs

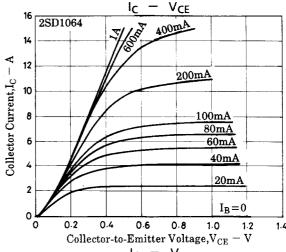
Switching Time Test Circuit

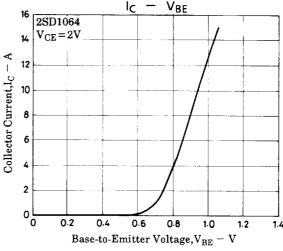


Unit (resistance : Ω , capacitance : F)

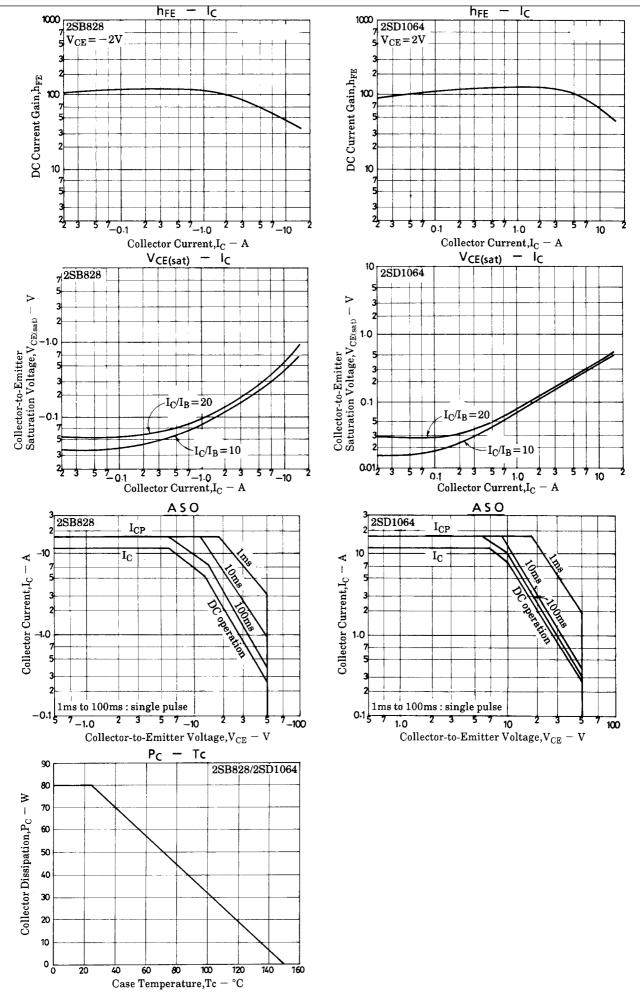








2SB828/2SD1064



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