

2SB825/2SD1061

50V/7A Switching Applications

Applications

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

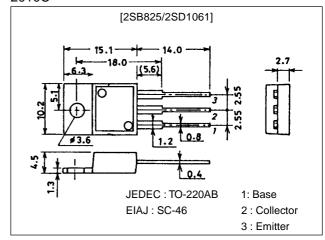
Features

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

Package Dimensions

unit:mm

2010C



(): 2SB825

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}		(–)12	Α
Collector Dissipation	PC	Tc=25°C	40	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions		Unit		
			min	typ	max	Offic
Collector Cutoff Current	I _{CBO}	V _{CB} =(-)40V, I _E =0			(-)0.1	mA
Emitter Cutoff Current	IEBO	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	fΤ	V _{CE} =(-)5V, I _C =(-)1A		10		MHz

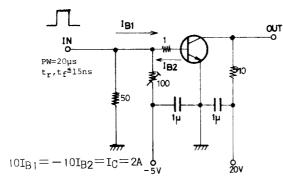
^{* :} The 2SB825/2SD1061 are classified by 1A h_{FE} as follows :

70	Q	140	100	R	200	140	S	280	
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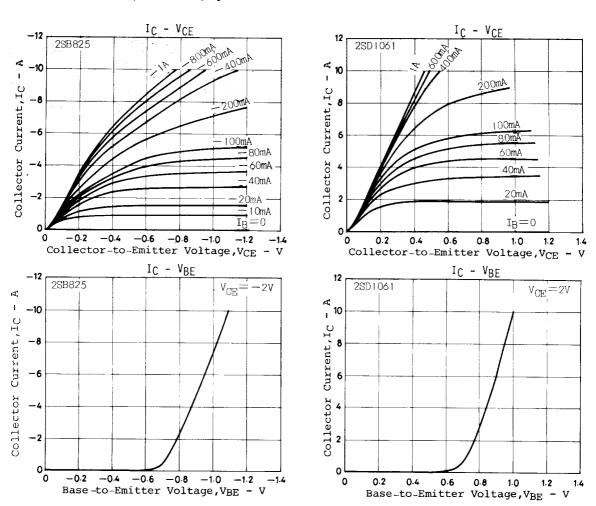
Parameter	Symbol	Conditions		Unit		
Falametei	Symbol	Conditions		typ	max	Onit
Collector-to-Emitter Saturation Voltage	VCE(sat)	I _C =(-)4A, I _B =(-)0.4A			(-)0.4	V
Collector-to-Base Breakdown Voltage	V _(BR) CBO	I _C =(-)1mA, I _E =0	(–)60			V
Collector-to-Emitter Breakdown Voltage	V _(BR) CEO	I _C =(-)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

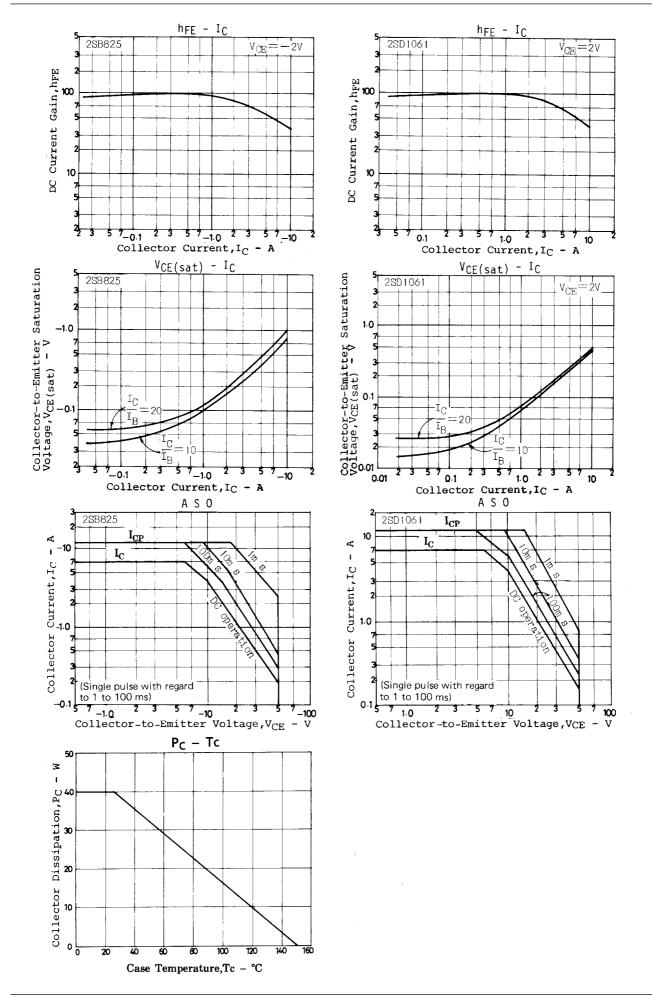
Switching Time Test Circuit



(For PNP, the polarity is reversed.)

Unit (resistance : Ω , capacitance : F)





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