

2SB1508/2SD2281

50V/12A High-Current Switching Applications

Applications

· Relay drivers, high-speed inverters, converters.

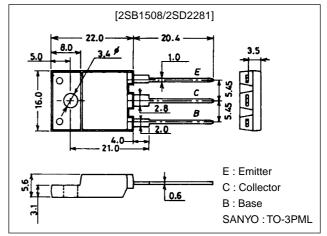
Features

- \cdot Low collector-to-emitter saturation voltage : V_CE(sat)=-0.5V (PNP), 0.4V (NPN) max.
- · Wide ASO and highly registant to breakdown.
- · Micaless package facilitating easy mounting.

Package Dimensions

unit:mm

2039A



(): 2SB1508

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	VCEO		(–)50	V
Emitter-to-Base Voltage	V _{EBO}		(–)6	V
Collector Current	IC		(–)12	Α
Collector Current (Pulse)	ICP		(-)25	Α
Collector Dissipation	PC		3.0	W
		Tc=25°C	45	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
Faiametei	Symbol	Conditions	min	typ	max	Offic
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*	
DC Current Gain	h _{FE} 2	V _{CE} =(-)2V, I _C =(-)5A	30			
Gain-Bandwidth Product	fT	V _{CE} =(-)5V, I _C =(-)1A		10		MHz
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =(-)6A, I _B =(-)0.3A			(-0.5)	V
					0.4	V

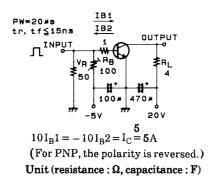
 \ast : The 2SB1508/2SD2281 are classified by 1A h_{FE} as follows :

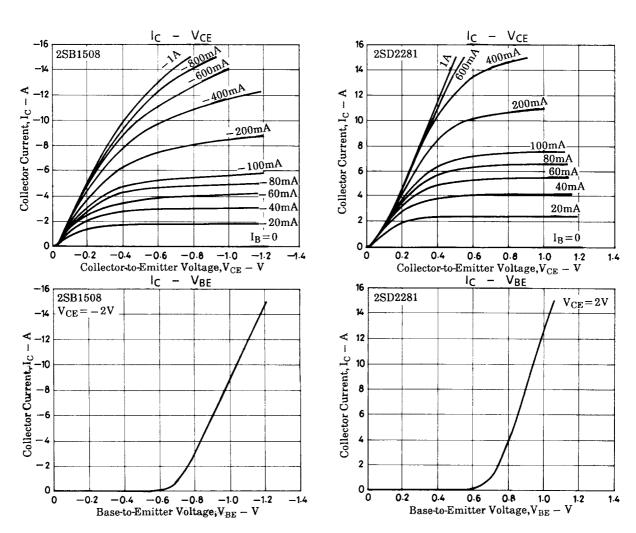
70	Q	140	100	R	200	140	S	280
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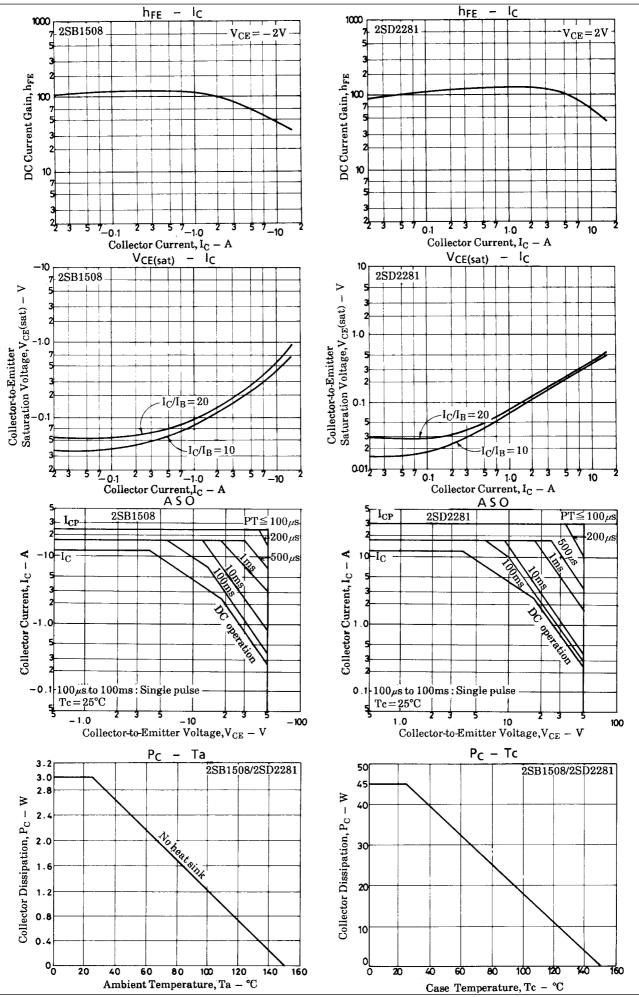
Parameter	Symbol	Conditions	Ratings			Unit
r arameter	Symbol	Conditions		typ	max	Offic
Collector-to-Base Breakdown Voltage	V _(BR) CBO	I _C =(-)1mA, I _E =0	(–)60			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =(–)1mA, R _{BE} =∞	(–)50			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I _E =(-)1mA,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

Switching Time Test Circuit





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