2SB1121

Bipolar Transistor -25V, -2A, Low VCE(sat) PNP Single PCP



http://onsemi.com

Applications

• Voltage regulators, relay drivers, lamp drivers, electrical equipment

Features

- Adoption of FBET, MBIT processes
- Large current capacity and wide SOA
- Low collector to emitter saturation voltage
- Fast switching speed
- Ultrasmall size making it easy to provide high-density, small-sized hybrid IC's

Specifications

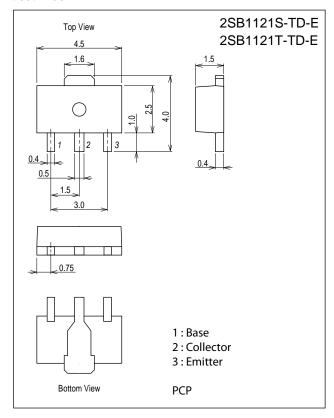
Absolute Maximum Ratings at $Ta = 25^{\circ}C$

	<u> </u>			
Parameter	Symbol	Conditions	Ratings	Unit
Collector to Base Voltage	VCBO		-30	V
Collector to Emitter Voltage	VCEO		-25	V
Emitter to Base Voltage	VEBO		-6	V
Collector Current	IC		-2	Α
Collector Current (Pulse)	ICP		-5	Α

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Package Dimensions

unit: mm (typ) 7007B-004



Product & Package Information

• Package

• JEITA, JEDEC : SC-62, SOT-89, TO-243

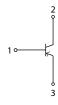
• Minimum Packing Quantity : 1,000 pcs./reel

Packing Type: TD

Marking



Electrical Connection



Semiconductor Components Industries, LLC, 2014

January, 2014

13114 TK/IM TC-00003091 /31010EA TK IM /O1003TN (KOTO)/92093HA (KT)/4107KI/3045MW,TS No. 1787-1/4

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Parameter	Symbol	Conditions	Ratings	Unit
Collector Dissipation	PC		500	mW
		When mounted on ceramic substrate (250mm ² ×0.8mm)	1.3	W
Junction Temperature	Тј		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

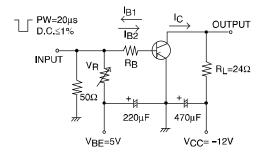
Electrical Characteristics at Ta = 25°C

B	Symbol	0	Ratings			11.2
Parameter		Conditions	min	typ	max	Unit
Collector Cutoff Current	ICBO	V _{CB} =-20V, I _E =0A			-0.1	μΑ
Emitter Cutoff Current	I _{EBO}	V _{EB} =-4V, I _C =0A			-0.1	μΑ
DC Current Gain	hFE1	V _{CE} =-2V, I _C =-100mA	140*		400*	
	hFE2	V _{CE} =-2V, I _C =-1.5A	65			
Gain-Bandwidth Product	fŢ	V _{CE} =-10V, I _C =-50mA		150		MHz
Output Capacitance	Cob	V _{CB} =-10V, f=1MHz		32		pF
Collector to Emitter Saturation Voltage	V _{CE} (sat)	I _C =-1.5A, I _B =-75mA		-0.35	-0.6	V
Base to Emitter Saturation Voltage	V _{BE} (sat)	I _C =-1.5A, I _B =-75mA		-0.85	-1.2	V
Collector to Base Breakdown Voltage	V(BR)CBO	I _C =-10μA, I _E =0A	-30			V
Collector to Emitter Breakdown Voltage	V(BR)CEO	IC=-1mA, RBE=∞	-25			V
Emitter to Base Breakdown Voltage	V(BR)EBO	I _E =-10μA, I _C =0A	-6			V
Turn-ON Time	ton			60		ns
Storage Time	t _{stg}	See specified Test Circuit		350	_	ns
Fall Time	tf			25		ns

^{*:} The 2SB1121 is classified by 100mA hFE as follows:

Rank	S	T
hFE	140 to 280	200 to 400

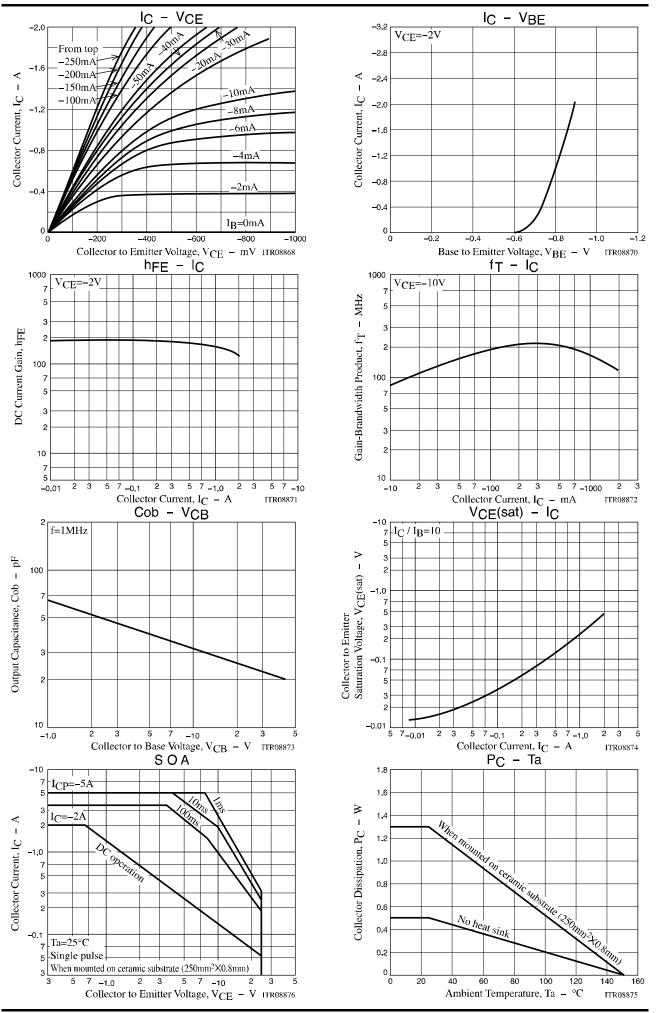
Switching Time Test Circuit



 $I_{C}=20I_{B1}=-20I_{B2}=-0.5A$

Ordering Information

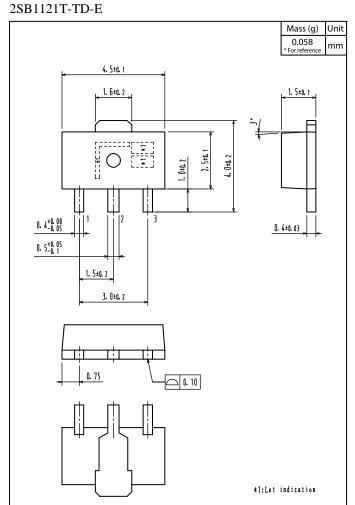
Device	Package	Shipping	Memo
2SB1121S-TD-E 2SB1121T-TD-E	PCP	1,000pcs./reel	Pb-Free

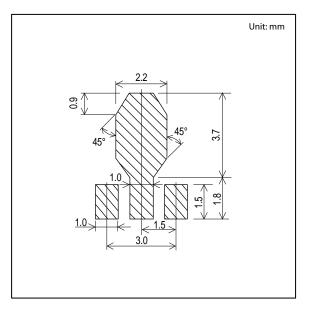


Outline Drawing

2SB1121S-TD-E

Land Pattern Example





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