# 2SB0945 (2SB945)

### Silicon PNP epitaxial planar type

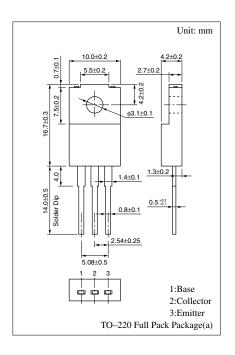
For power switching Complementary to 2SD1270

#### Features

- ullet Low collector to emitter saturation voltage  $V_{\text{CE(sat)}}$
- Satisfactory linearity of foward current transfer ratio h<sub>FE</sub>
- Large collector current I<sub>C</sub>
- Full-pack package which can be installed to the heat sink with one screw

#### Absolute Maximum Ratings (T<sub>C</sub>=25°C)

Parameter		Symbol	Ratings	Unit	
Collector to base voltage		$V_{CBO}$	-130	V	
Collector to emitter voltage		$V_{CEO}$	-80	V	
Emitter to base voltage		$V_{\rm EBO}$	-7	V	
Peak collector current		$I_{CP}$	-10	A	
Collector current		$I_{C}$	-5	A	
Collector power	T <sub>C</sub> =25°C	D	40	***	
dissipation	Ta=25°C	$P_{C}$	2	W	
Junction temperature		$T_{j}$	150	°C	
Storage temperature		$T_{stg}$	-55 to +150	°C	



#### Electrical Characteristics (T<sub>C</sub>=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I <sub>CBO</sub>	$V_{CB} = -100V, I_E = 0$			-10	μА
Emitter cutoff current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$			-50	μА
Collector to emitter voltage	V <sub>CEO</sub>	$I_{\rm C} = -10 \text{mA}, I_{\rm B} = 0$	-80			V
Forward current transfer ratio	h <sub>FE1</sub>	$V_{CE} = -2V, I_C = -0.1A$	45			
	h <sub>FE2</sub> *	$V_{CE} = -2V, I_C = -2A$	90		260	
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	$I_C = -4A, I_B = -0.2A$			- 0.5	V
Base to emitter saturation voltage	V <sub>BE(sat)</sub>	$I_C = -4A, I_B = -0.2A$			-1.5	V
Transition frequency	$f_T$	$V_{CE} = -10V, I_{C} = -0.5A, f = 10MHz$		30		MHz
Turn-on time	t <sub>on</sub>			0.13		μs
Storage time	t <sub>stg</sub>	$I_C = -2A, I_{B1} = -0.2A, I_{B2} = 0.2A$		0.5		μs
Fall time	t <sub>f</sub>		·	0.13		μs

#### \*h<sub>FE2</sub> Rank classification

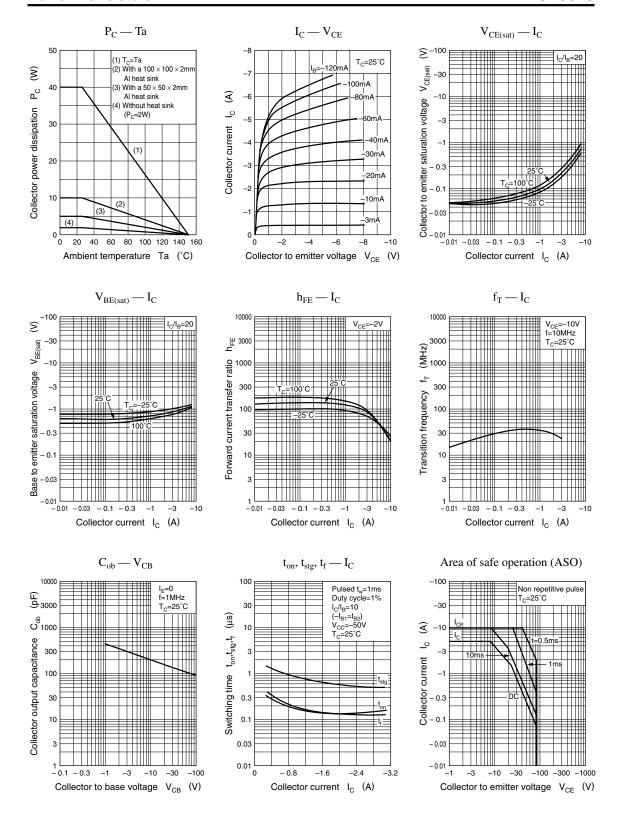
Rank	Q	P
h <sub>FE2</sub>	90 to 180	130 to 260

Note: Ordering can be made by the common rank (PQ rank  $h_{FE2} = 90$  to 260) in the rank classification.

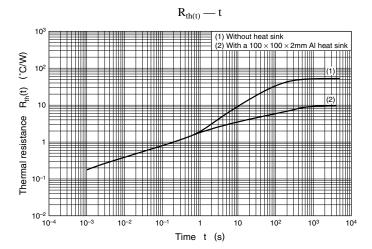
Note.) The Part number in the Parenthesis shows conventional part number.

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