# 2SB1490

## Silicon PNP epitaxial planar type darlington

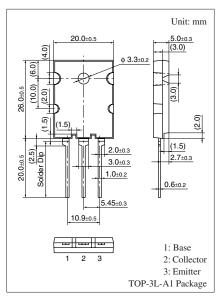
For power amplification Complementary to 2SD2250

#### ■ Features

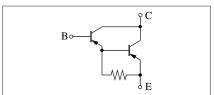
- Optimum for 80 W HiFi output
- High forward current transfer ratio hFE
- Low collector-emitter saturation voltage V<sub>CE(sat)</sub>

### ■ Absolute Maximum Ratings $T_C = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Er	V <sub>CBO</sub>	-160	V	
Collector-emitter voltage	V <sub>CEO</sub>	-140	V	
Emitter-base voltage (Coll	$V_{EBO}$	-5	V	
Collector current	$I_C$	-7	A	
Peak collector current	$I_{CP}$	-12	A	
Collector power dissipation		P <sub>C</sub>	90	W
	$T_a = 25$ °C		3.5	
Junction temperature		T <sub>j</sub>	150	°C
Storage temperature		T <sub>stg</sub>	-55 to +150	°C



#### Internal Connection



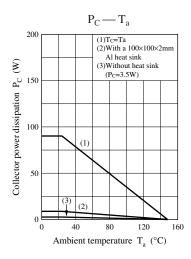
## ■ Electrical Characteristics $T_C = 25^{\circ}C \pm 3^{\circ}C$

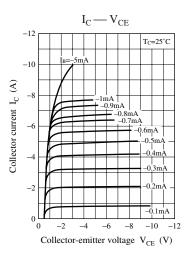
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_C = -30 \text{ mA}, I_B = 0$	-140			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = -160 \text{ V}, I_{E} = 0$			-100	μΑ
Collector-emitter cutoff current (Base open)	$I_{CEO}$	$V_{CE} = -140 \text{ V}, I_B = 0$			-100	μΑ
Emitter-base cutoff current (Collector open)	$I_{EBO}$	$V_{EB} = -5 \text{ V}, I_{C} = 0$			-100	μΑ
Forward current transfer ratio	h <sub>FE1</sub>	$V_{CE} = -5 \text{ V}, I_{C} = -1 \text{ A}$	2000			_
	h <sub>FE2</sub> *	$V_{CE} = -5 \text{ V}, I_{C} = -6 \text{ A}$	5 000		30 000	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_C = -6 \text{ A}, I_B = -6 \text{ mA}$			-2.5	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	$I_C = -6 \text{ A}, I_B = -6 \text{ mA}$			-3.0	V
Transition frequency	$f_T$	$V_{CE} = -10 \text{ V}, I_{C} = -0.5 \text{ A}, f = 1 \text{ MHz}$		20		MHz
Turn-on time	t <sub>on</sub>	$I_C = -6 \text{ A}, I_{B1} = -6 \text{ mA}, I_{B2} = 6 \text{ mA}$		1.0		μs
Storage time	t <sub>stg</sub>	$V_{\rm CC} = -50 \text{ V}$		1.5		μs
Fall time	$t_{\rm f}$			1.2		μs

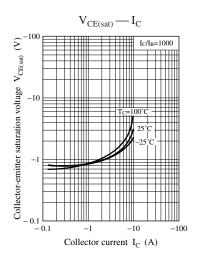
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

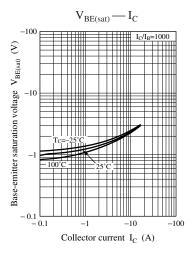
#### 2. \*: Rank classification

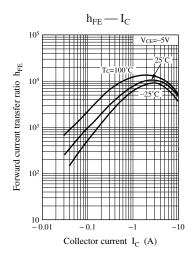
Rank	Q	Р		
h <sub>FE2</sub>	5 000 to 15 000	8 000 to 30 000		

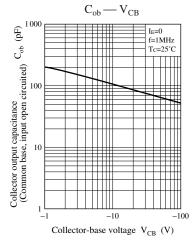


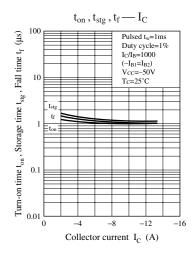


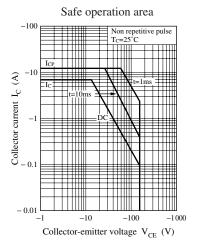




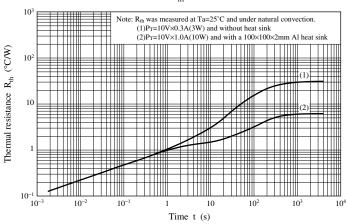








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