2SB1470

Silicon PNP triple diffusion planar type darlington

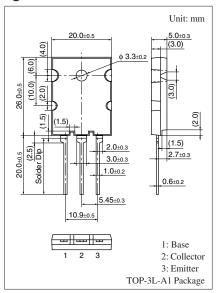
For power amplification
Complementary to 2SD2222

■ Features

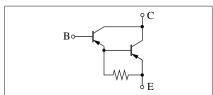
- Optimum for 120 W HiFi output
- High forward current transfer ratio hFE
- Low collector-emitter saturation voltage V_{CE(sat)}

■ Absolute Maximum Ratings $T_C = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Er	V _{CBO}	-160	V	
Collector-emitter voltage (V _{CEO}	-160	V	
Emitter-base voltage (Coll	V _{EBO}	-5	V	
Collector current	I_C	-8	A	
Peak collector current	I_{CP}	-15	A	
Collector power dissipation	P_{C}	150	W	
	$T_a = 25^{\circ}C$		3.5	
Junction temperature		T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C	



Internal Connection



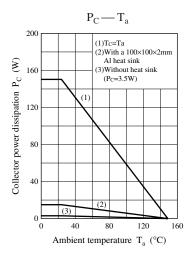
■ Electrical Characteristics $T_C = 25$ ° $C \pm 3$ °C

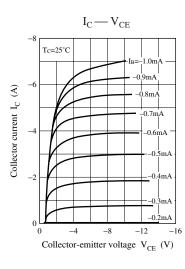
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-emitter voltage (Base open)	V _{CEO}	$I_C = -30 \text{ mA}, I_B = 0$	-160			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -160 \text{ V}, I_{E} = 0$			-100	μΑ
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = -160 \text{ V}, I_B = 0$			-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 _{FE1}	$V_{CE} = -5 \text{ V}, I_{C} = -1 \text{ A}$	1 000			_
	h _{FE2} *	$V_{CE} = -5 \text{ V}, I_{C} = -7 \text{ A}$	3 500		20 000	
Collector-emitter saturation voltage	V _{CE(sat)}	$I_C = -7 \text{ A}, I_B = -7 \text{ mA}$			-3	V
Base-emitter saturation voltage	V _{BE(sat)}	$I_C = -7 \text{ A}, I_B = -7 \text{ mA}$			-3	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 _{on}	$I_C = -7 \text{ A}, I_{B1} = -7 \text{ mA}, I_{B2} = 7 \text{ mA}$		1.0		μs
Storage time	t _{stg}	$V_{\rm CC} = -50 \text{ V}$		1.5		μs
Fall time	$t_{\rm f}$			1.2		μs

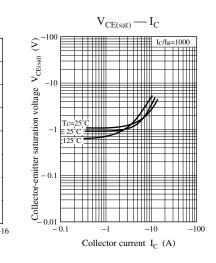
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

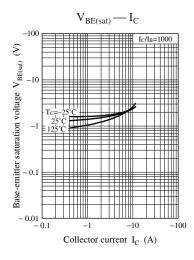
2. *: Rank classification

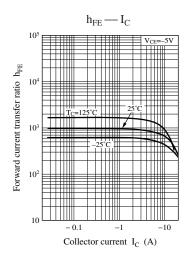
Rank	Q	S	Р	
h _{FE2}	3 500 to 10 000	5 000 to 15 000	7 000 to 20 000	

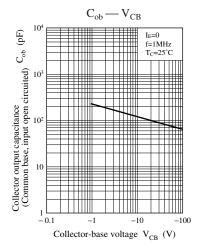


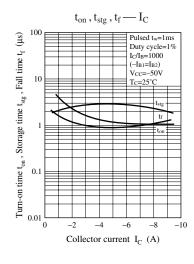


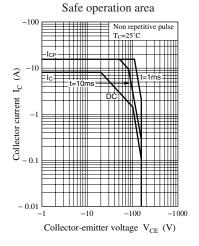


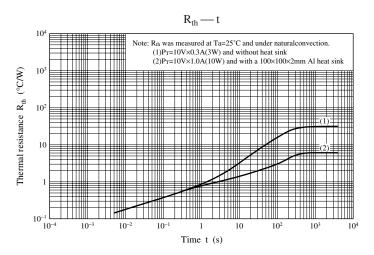












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