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## Silicon NPN triple diffusion planar type

For high power amplification Complementary to 2SB1347

- Features
- Satisfactory foward current transfer ratio  $h_{\text{FE}}$  collector current  $I_{\text{C}}$  characteristics
- Wide area of safe operation (ASO)
- High transition frequency f<sub>T</sub>
- Optimum for the output stage of a HiFi audio amplifier

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

Parameter		Symbol	Ratings	Unit	
Collector to base voltage		V <sub>CBO</sub>	160	V	
Collector to emitter voltage		V <sub>CEO</sub>	160	V	
Emitter to base voltage		V <sub>EBO</sub>	5	V	
Peak collector current		I <sub>CP</sub>	20	A	
Collector current		I <sub>C</sub>	12	A	
Collector power	T <sub>C</sub> =25°C		120		
dissipation	Ta=25°C	P <sub>C</sub>	3.5	W	
Junction temperature		Tj	150	°C	
Storage temperature		T <sub>stg</sub>	-55 to +155	°C	



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

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I <sub>CBÓ</sub>	$V_{CB} = 160 V, I_E = 0$			50	μΑ
Emitter cutoff current	I <sub>EBO</sub>	$V_{EB} = 3V, I_C = 0$			50	μΑ
Forward current transfer ratio	h <sub>FEI</sub>	$V_{CE} = 5V, I_{C} = 20mA$	20			
	h <sub>FE2</sub> *	$V_{CE} = 5V, I_C = 1A$	60		200	
	h <sub>FE3</sub>	$V_{CE} = 5V, I_C = 8A$	20			
Base to emitter voltage	V <sub>BE</sub>	$V_{CE} = 5V, I_{C} = 8A$			1.8	v
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	$I_{\rm C} = 8$ A, $I_{\rm B} = 0.8$ A			2.0	V
Transition frequency	f <sub>T</sub>	$V_{CE} = 5V, I_C = 0.5A, f = 1MHz$	-	20		MHz
Collector output capacitance	Cob	$V_{CB} = 10V, I_E = 0, f = 1MHz$		210		pF

#### \*hFE2 Rank classification

Rank	Q	S	Р
h <sub>FE2</sub>	60 to 120	80 to 160	100 to 200

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