

2SD2107

**Silicon NPN Triple Diffused
Low Frequency Power Amplifier**

Absolute Maximum Ratings (Ta = 25°C)

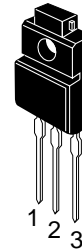
Item	Symbol	Rating	Unit
Collector to base voltage	V _{CBO}	70	V
Collector to emitter voltage	V _{CEO}	60	V
Emitter to base voltage	V _{EBO}	5	V
Collector current	I _C	4	A
Collector peak current	i _{C(peak)}	8	A
Collector power dissipation	P _C	2	W
	P _C ^{*1}	25	
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

Note: 1. Value at T_C = 25°C.

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test condition
Collector to base breakdown voltage	V _{(BR)CBO}	70	—	—	V	I _C = 10 μA, I _E = 0
Collector to emitter breakdown voltage	V _{(BR)CEO}	60	—	—	V	I _C = 50 mA, R _{BE} = ∞
Emitter to base breakdown voltage	V _{(BR)EBO}	5	—	—	V	I _E = 10 μA, I _C = 0
Collector cutoff current	I _{CBO}	—	—	10	μA	V _{CB} = 60 V, I _E = 0
	I _{CEO}	—	—	10		V _{CE} = 50 V, R _{BE} = ∞
DC current transfer ratio	h _{FE1} ^{*2}	60	—	200		V _{CE} = 4 V, I _C = 1 A ^{*1}
	h _{FE2}	35	—			V _{CE} = 4 V, I _C = 0.1 A ^{*1}
Base to emitter voltage	V _{BE}	—	—	1.0	V	V _{CE} = 4 V, I _C = 1 A ^{*1}
Collector to emitter saturation voltage	V _{CE(sat)}	—	—	1.0	V	I _C = 2 A, I _B = 0.2 A ^{*1}

TO-220FM



1. Base
2. Collector
3. Emitter

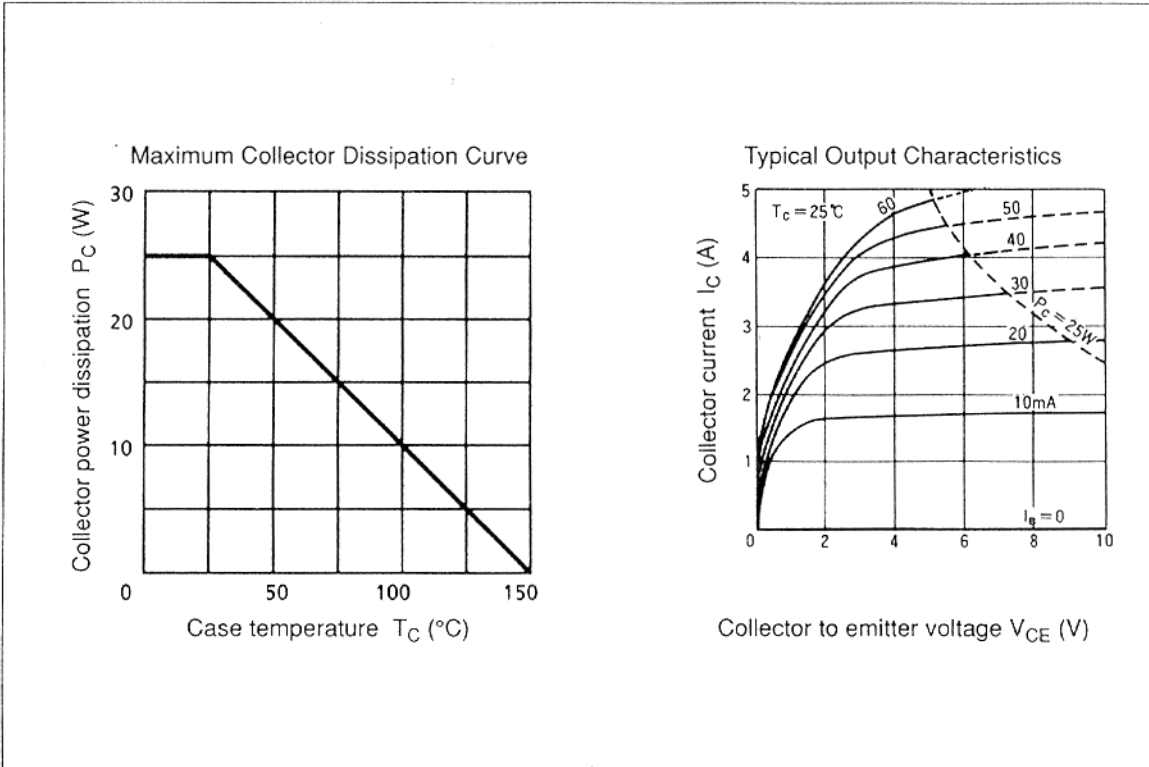
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Electrical Characteristics (Ta = 25°C) (cont)

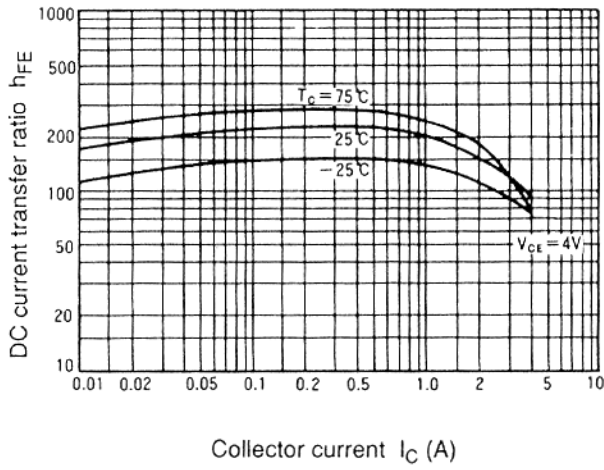
Item	Symbol	Min	Typ	Max	Unit	Test condition
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.2	V	$I_C = 2\text{ A}, I_B = 0.2\text{ A}^1$

Notes: 1. Pulse Test.
2. The 2SD2107 is grouped by h_{FE1} as follows.

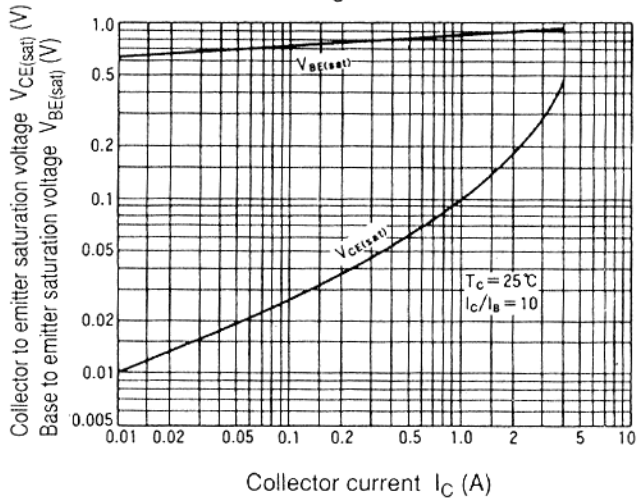
B	C
60 to 120	100 to 200



DC Current Transfer Ratio vs. Collector Current



Saturation Voltage vs. Collector Current



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