

# 2SD2107

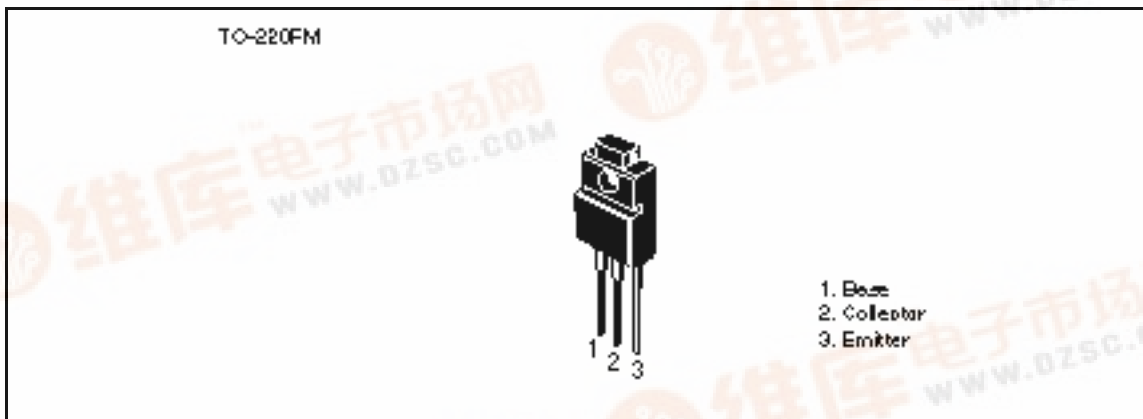
Silicon NPN Triple Diffused

# HITACHI

## Application

Low frequency power amplifier

## Outline



## 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  $T_C = 25^\circ\text{C}$ .

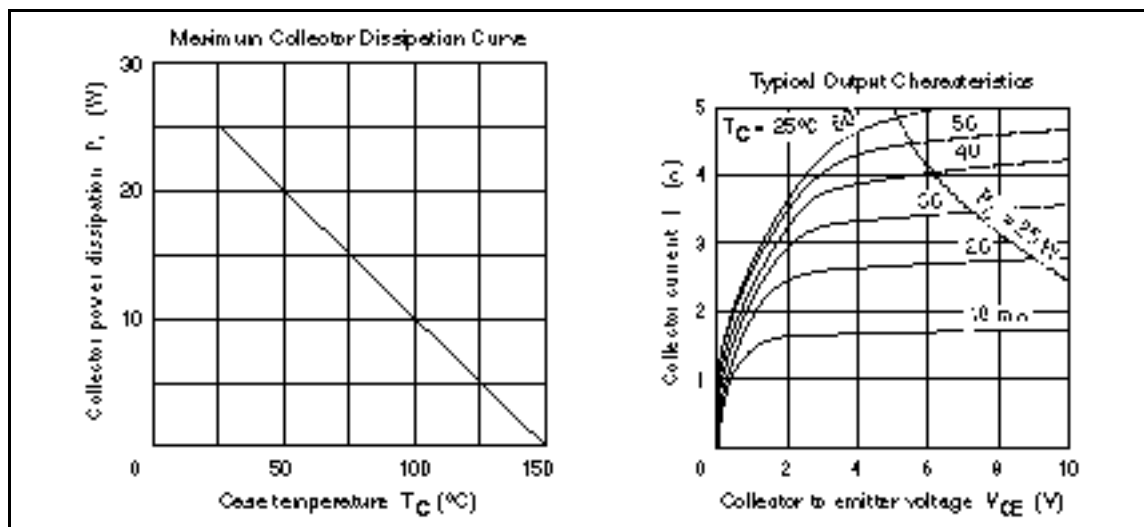
## 2SD2107

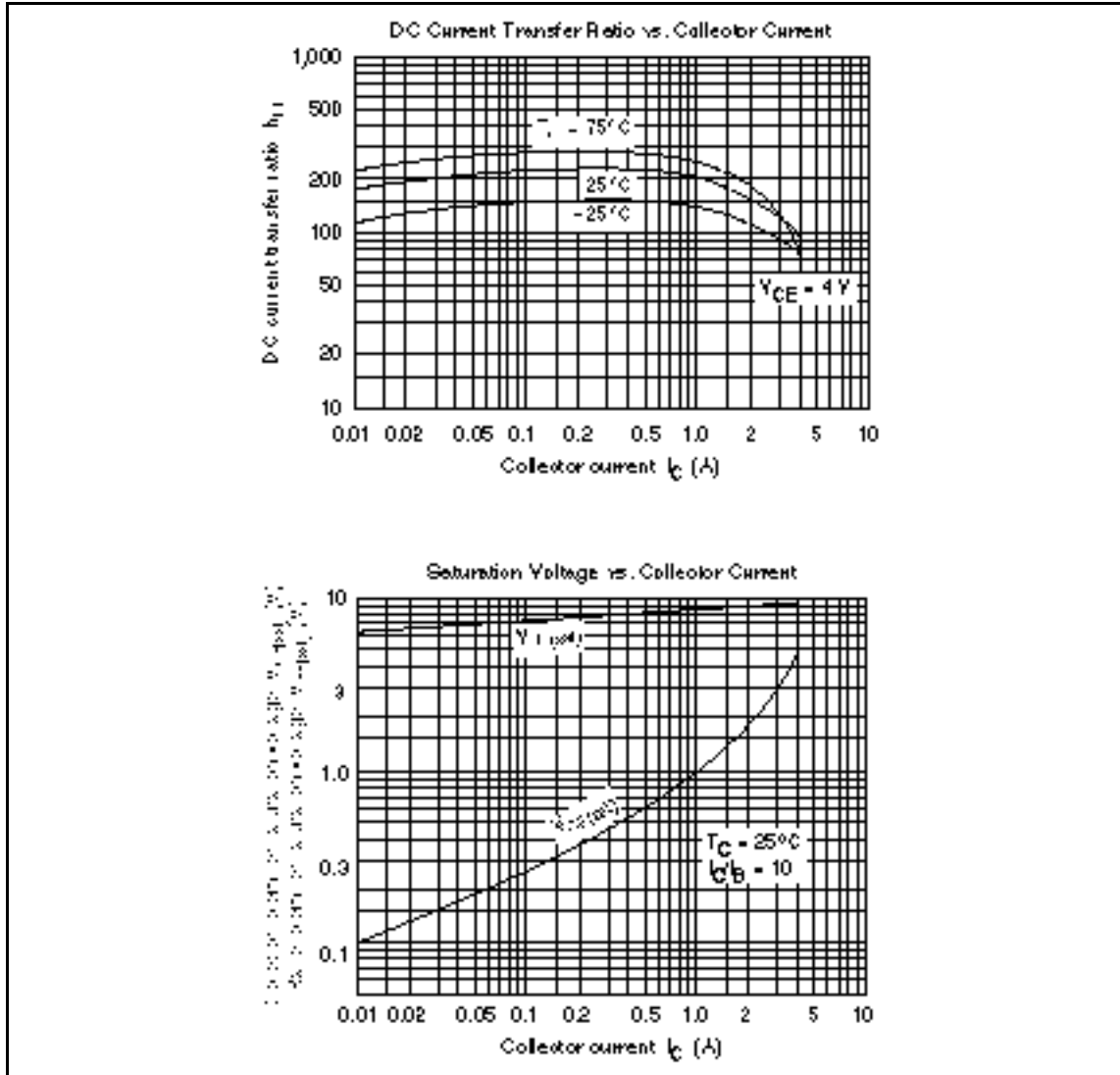
### Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	70	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	60	—	—	V	$I_C = 50 \text{ mA}, R_{BE} =$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	V	$I_E = 10 \mu A, I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	10	$\mu A$	$V_{CB} = 60 \text{ V}, I_E = 0$
	$I_{CEO}$	—	—	10		$V_{CE} = 50 \text{ V}, R_{BE} =$
DC current transfer ratio	$h_{FE1}^{*2}$	60	—	200		$V_{CE} = 4 \text{ V}, I_C = 1 \text{ A}^{*1}$
	$h_{FE2}$	35	—			$V_{CE} = 4 \text{ V}, I_C = 0.1 \text{ A}^{*1}$
Base to emitter voltage	$V_{BE}$	—	—	1.0	V	$V_{CE} = 4 \text{ V}, I_C = 1 \text{ A}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.0	V	$I_C = 2 \text{ A}, I_B = 0.2 \text{ A}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.2	V	$I_C = 2 \text{ A}, I_B = 0.2 \text{ A}^{*1}$

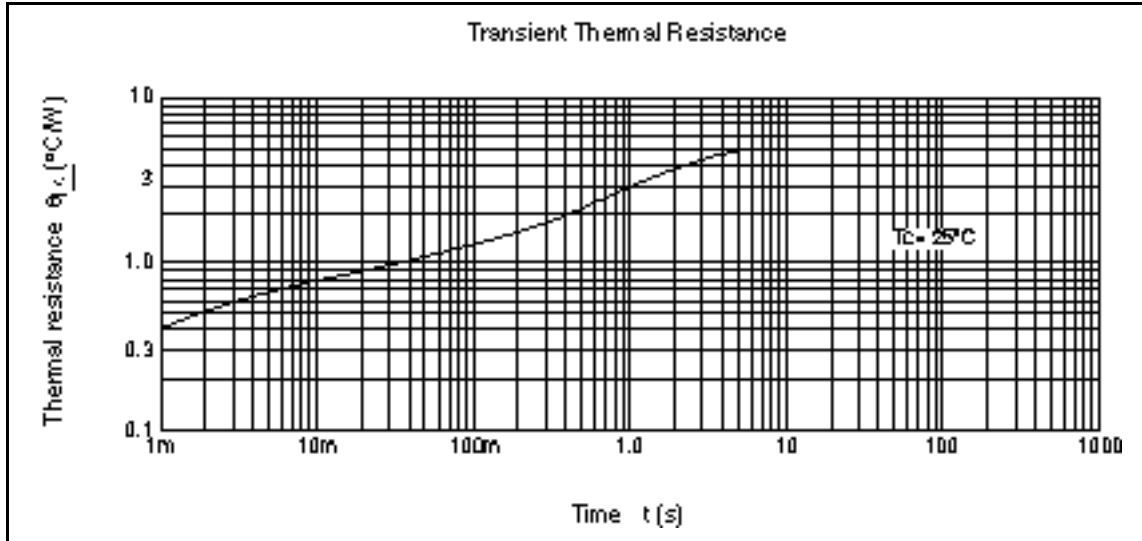
- Notes: 1. Pulse test.  
2. The 2SD2107 is grouped by  $h_{FE1}$  as follows.

B	C
60 to 120	100 to 200





## 2SD2107



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