

2SD2067 (Tentative)

Silicon NPN epitaxial planer type

For low-frequency output amplification

Features

- Darlington connection.
- High foward current transfer ratio h_{FE} .
- Large peak collector current I_{CP} .
- High collector to emitter voltage V_{CEO} .
- Allowing supply with the radial taping.

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	120	V
Collector to emitter voltage	V_{CEO}	100	V
Emitter to base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	3	A
Collector current	I_C	2	A
Collector power dissipation	P_C^*	1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

* Printed circuit board: Copper foil area of 1cm² or more, and the board thickness of 1.7mm for the collector portion

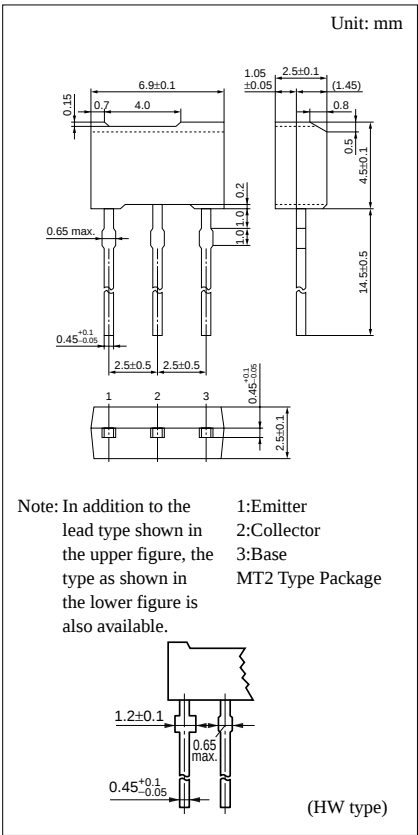
Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 25V, I_E = 0$			0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4V, I_C = 0$			1	μA
Collector to base voltage	V_{CBO}	$I_C = 100\mu A, I_E = 0$	120			V
Collector to emitter voltage	V_{CEO}	$I_C = 1mA, I_B = 0$	100			V
Emitter to base voltage	V_{EBO}	$I_E = 100\mu A, I_C = 0$	5			V
Forward current transfer ratio	h_{FE}^{*1}	$V_{CE} = 10V, I_C = 1A^{*2}$	4000		40000	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1A, I_B = 1mA^{*2}$			1.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1A, I_B = 1mA^{*2}$			2	V

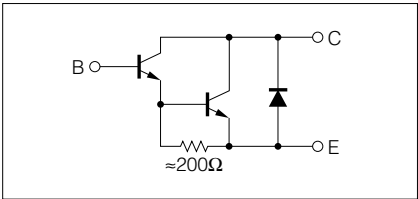
*1 h_{FE} Rank classification

Rank	Q	R	S
h_{FE}	4000 ~ 10000	8000 ~ 20000	16000 ~ 40000

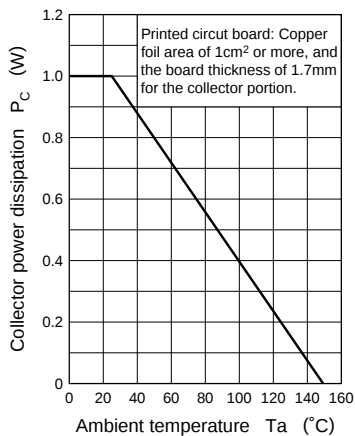
*2 Pulse measurement



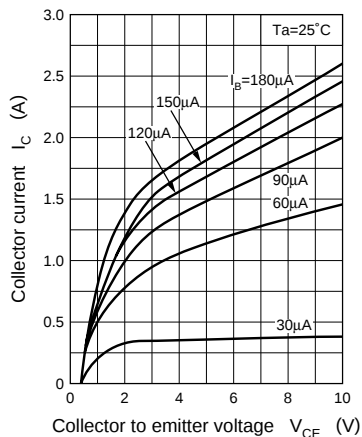
Internal Connection



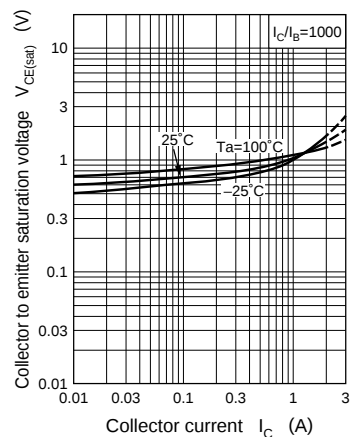
$P_C - T_a$



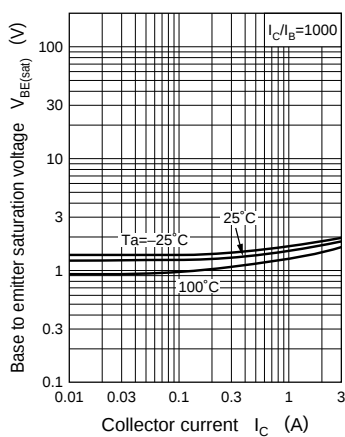
$I_C - V_{CE}$



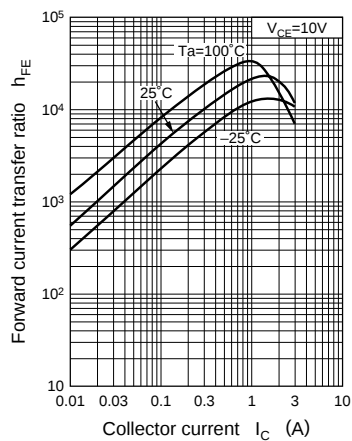
$V_{CE(sat)} - I_C$



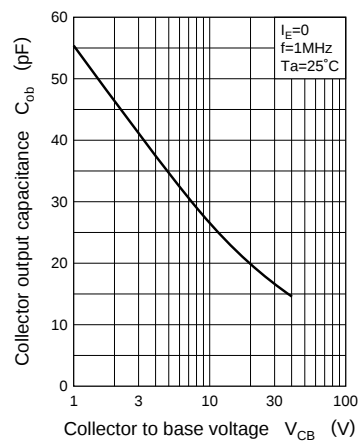
$V_{BE(sat)} - I_C$



$h_{FE} - I_C$



$C_{ob} - V_{CB}$



Area of safe operation (ASO)

