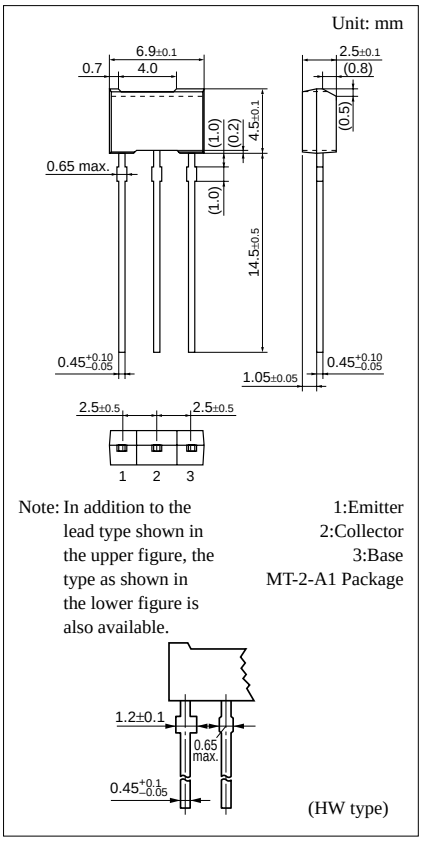
2SD2067 (Tentative)

Silicon NPN epitaxial planer type

For low-frequency output amplification



Features

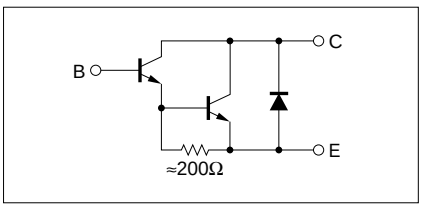
- Darlington connection.
- High foward current transfer ratio h_{FE}.
- Large peak collector current I_{CP}.
- High collector to emitter voltage V_{CEO}.
- Allowing supply with the radial taping.

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 1cm^2 or more, and the board thickness of 1.7mm for the collector portion

Internal Connection



Electrical Characteristics (Ta=25˚C)

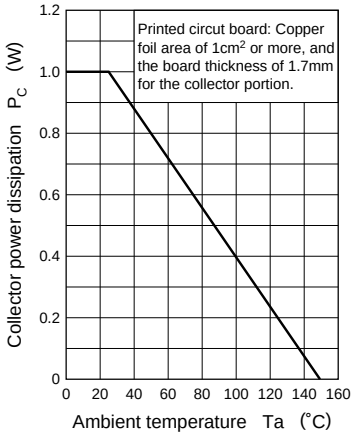
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 25V, I_E = 0			0.1	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 4V, I_C = 0			1	μA
Collector to base voltage	V_{CBO}	I_C = 100μA, I_E = 0	120			V
Collector to emitter voltage	V_{CEO}	I_C = 1mA, I_B = 0	100			V
Emitter to base voltage	V_{EBO}	I_E = 100μA, 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

*2 Pulse measurement

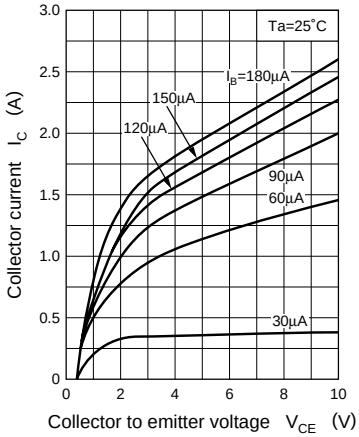
*1h_{FE} Rank classification

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

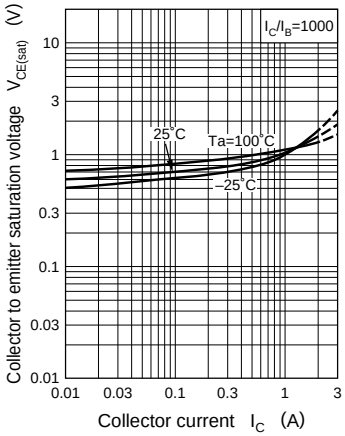
P_C — Ta



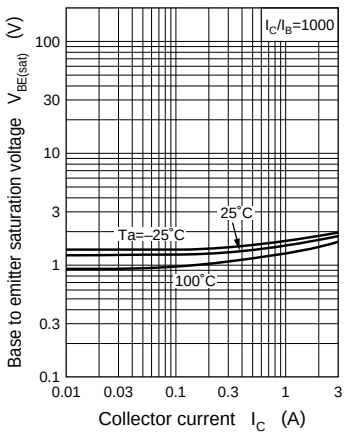
I_C — V_{CE}



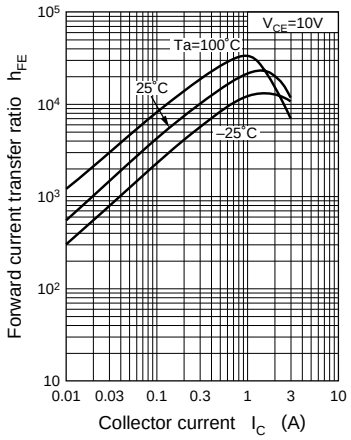
$V_{CE(sat)}$ — I_C



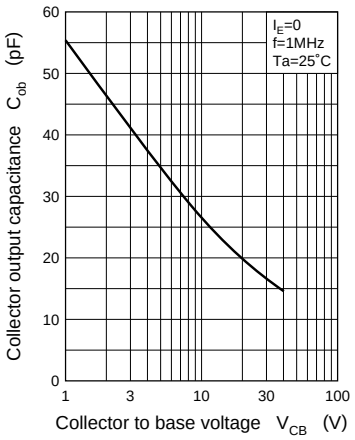
$V_{BE(sat)}$ — I_C



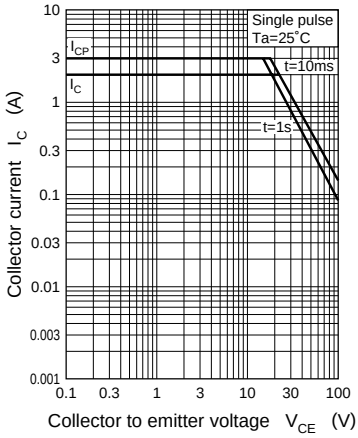
h_{FE} — I_C



C_{ob} — V_{CB}



Area of safe operation (ASO)



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