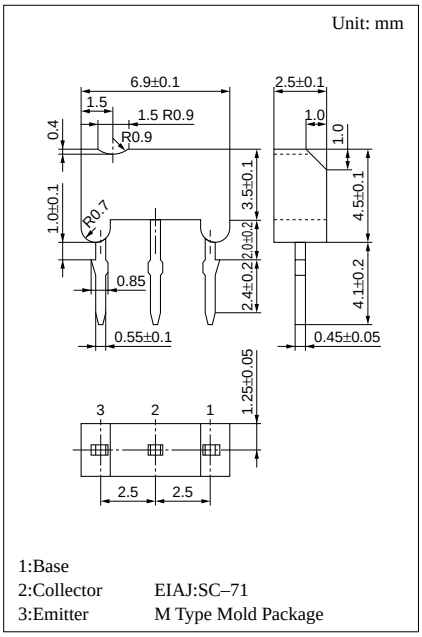
2SD1244

Silicon NPN epitaxial planer type

For low-frequency power amplification



Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- Satisfactory operation performances at high efficiency with the low-voltage power supply.
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	40	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	V_{EBO}	7	V
Peak collector current	I_{CP}	8	A
Collector current	I_C	5	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

Electrical Characteristics (Ta=25˚C)

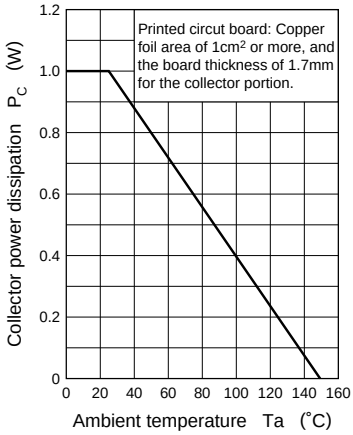
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 10V, I_E = 0			0.1	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 7V, I_C = 0			0.1	μA
Collector to emitter voltage	V_{CEO}	I_C = 1mA, I_B = 0	20			V
Emitter to base voltage	V_{EBO}	I_E = 10μA, I_C = 0	7			V
Forward current transfer ratio	h_{FE1}*1	V_{CE} = 2V, I_C = 0.5A*2	230		600	
	h_{FE2}	V_{CE} = 2V, I_C = 2A*2	150			
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 3A, I_B = 0.1A*2			1	V
Transition frequency	f_T	V_{CB} = 6V, I_E = –50mA, f = 200MHz		150		MHz
Collector output capacitance	C_{ob}	V_{CB} = 20V, I_E = 0, f = 1MHz			50	pF

*2 Pulse measurement

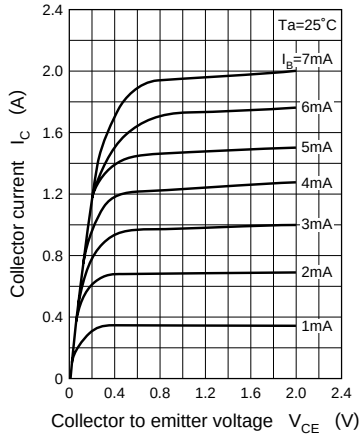
*1h_{FE1} Rank classification

Rank	Q	R
h_{FE1}	230 ~ 380	340 ~ 600

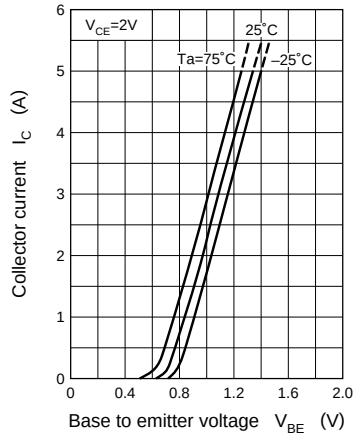
P_C — Ta



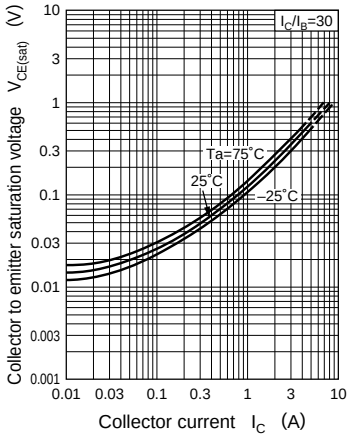
I_C — V_{CE}



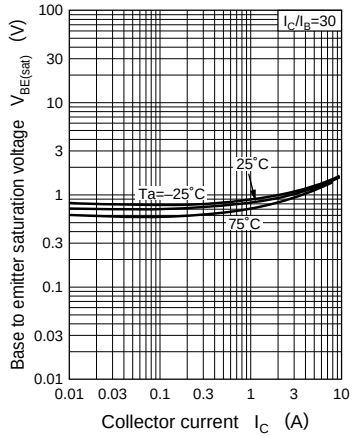
I_C — V_{BE}



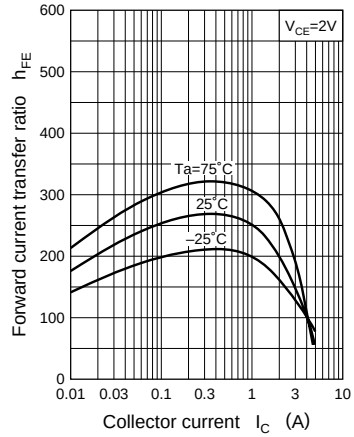
$V_{CE(sat)}$ — I_C



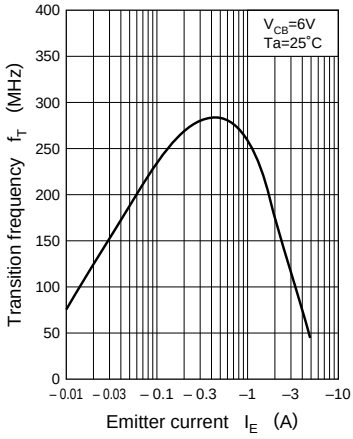
$V_{BE(sat)}$ — I_C



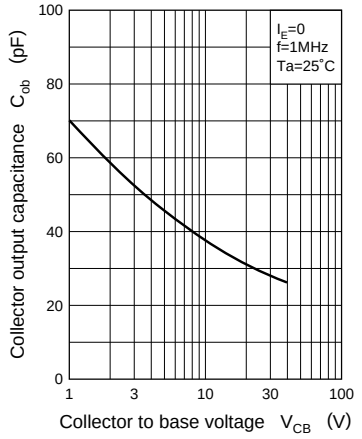
h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}



Area of safe operation (ASO)

