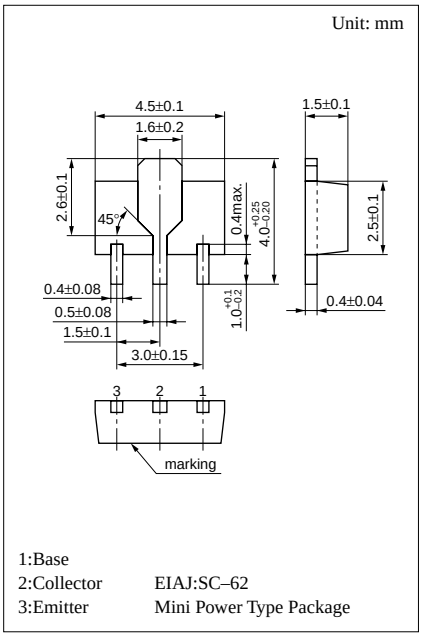
2SD2413

Silicon NPN triple diffusion planer type

For low-frequency output amplification



Marking symbol : 1S

Features

- High collector to base voltage V_{CBO}.
- High collector to emitter voltage V_{CEO}.
- Large collector power dissipation P_C.
- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- Mini Power type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

Absolute Maximum Ratings (Ta=25˚C)

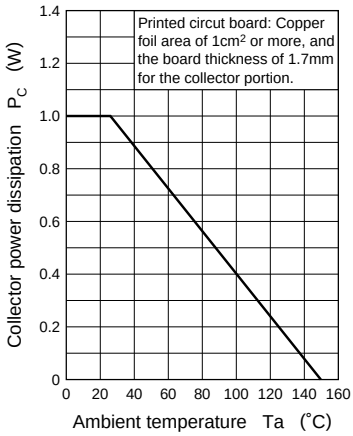
Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	400	V
Collector to emitter voltage	V_{CEO}	400	V
Emitter to base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	200	mA
Collector current	I_C	100	mA
Collector power dissipation	P_C*	1	W
Junction temperature	T_j	150	˚C
Storage temperature	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

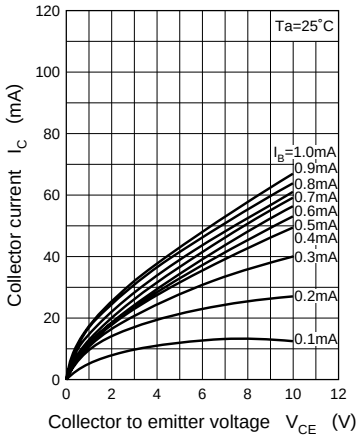
Electrical Characteristics (Ta=25˚C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V_{CBO}	I_C = 100µA, I_E = 0	400			V
Collector to emitter voltage	V_{CEO}	I_C = 500µA, I_B = 0	400			V
Emitter to base voltage	V_{EBO}	I_E = 100µA, I_C = 0	5			V
Forward current transfer ratio	h_{FE}	V_{CE} = 5V, I_C = 30mA	30			
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 50mA, I_B = 5mA			1.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	I_C = 50mA, I_B = 5mA			1.5	V
Transition frequency	f_T	V_{CB} = 30V, I_E = –20mA, f = 200MHz		40		MHz
Collector output capacitance	C_{ob}	V_{CB} = 30V, I_E = 0, f = 1MHz			7	pF

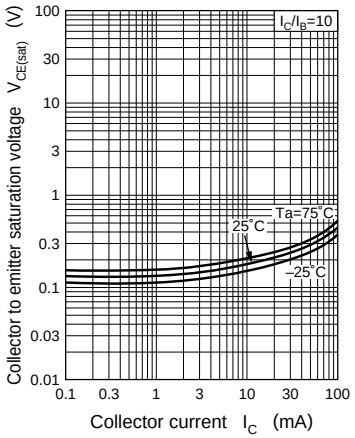
P_C — Ta



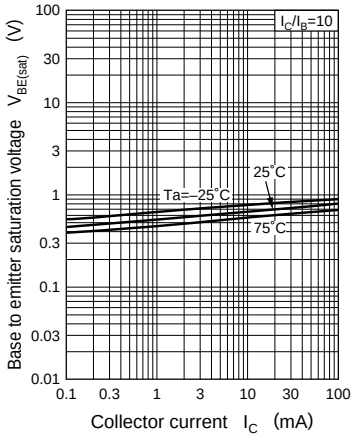
I_C — V_{CE}



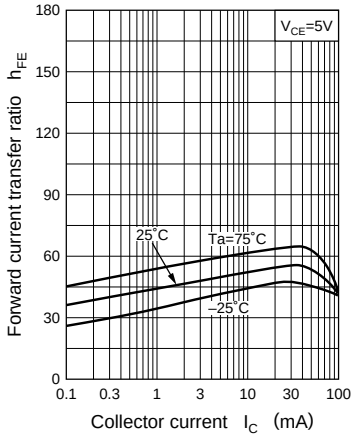
$V_{CE(sat)}$ — I_C



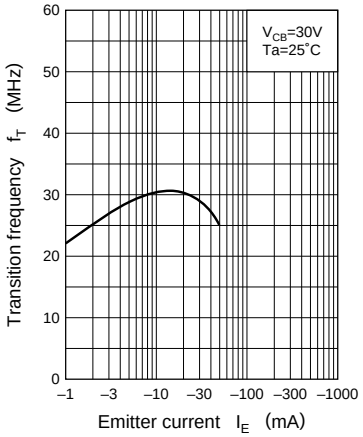
$V_{BE(sat)}$ — I_C



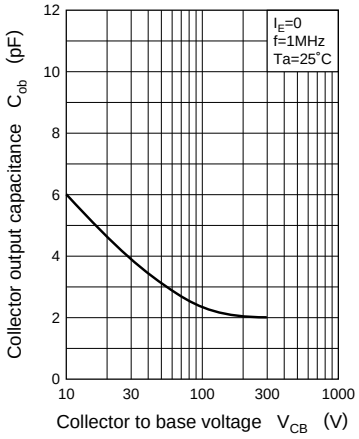
h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}



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