

2SD2413

Silicon NPN triple diffusion planar type

For low-frequency output amplification

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.

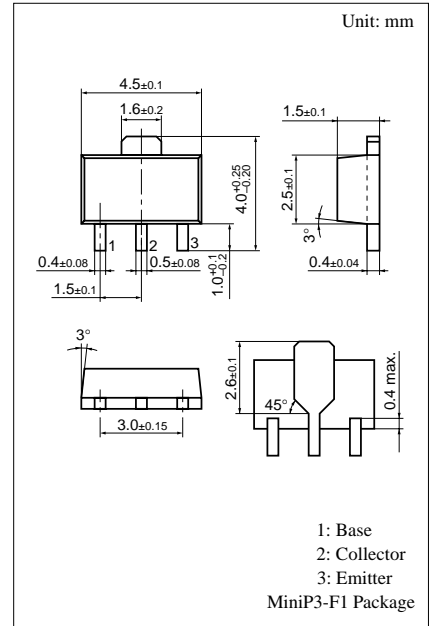
Absolute Maximum Ratings (Ta=25°C)

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 1cm² or more, and the board thickness of 1.7mm for the collector portion

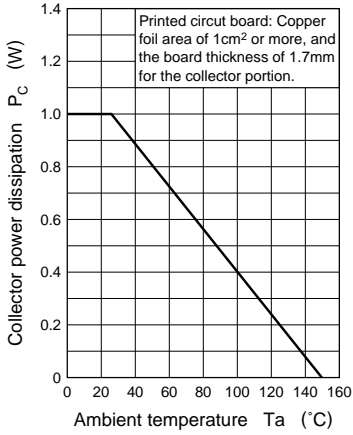
Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V_{CBO}	$I_C = 100\mu A, I_E = 0$	400			V
Collector to emitter voltage	V_{CEO}	$I_C = 500\mu A, I_B = 0$	400			V
Emitter to base voltage	V_{EBO}	$I_E = 100\mu A, I_C = 0$	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

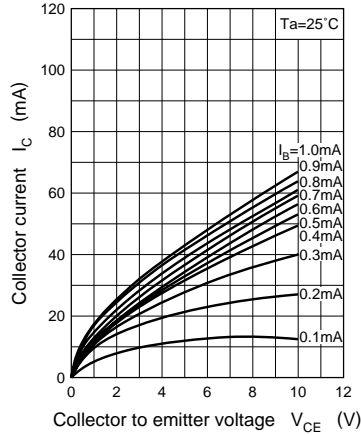


Marking symbol : 1S

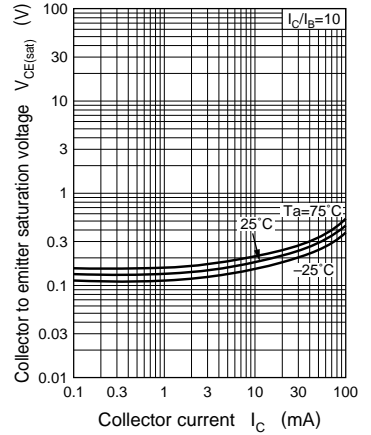
$P_C - T_a$



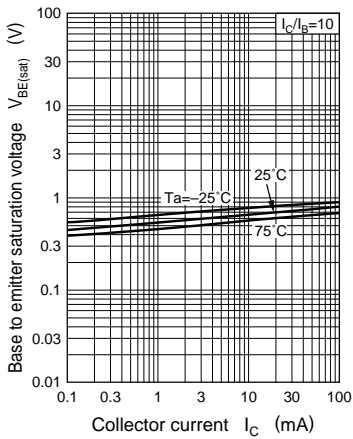
$I_C - V_{CE}$



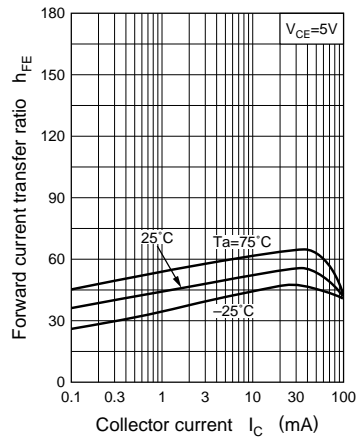
$V_{CE(sat)} - I_C$



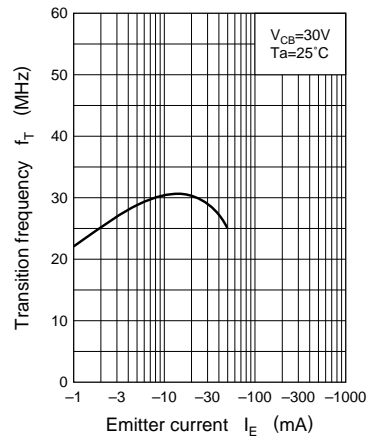
$V_{BE(sat)} - I_C$



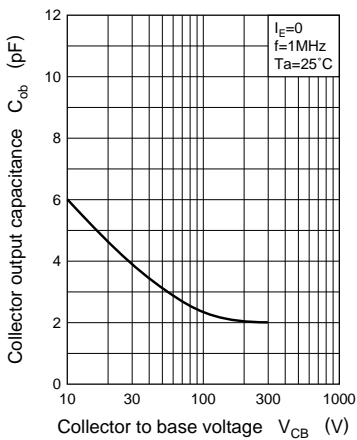
$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$



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