

# 2SD2225

## Silicon NPN epitaxial planer type

For low-frequency amplification

Complementary to 2SB1473

### Features

- High collector to emitter voltage  $V_{CEO}$  of 120V.
- Optimum for low-frequency driver amplification.
- 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	$V_{CEO}$	120	V
Emitter to base voltage	$V_{EBO}$	5	V
Peak collector current	$I_{CP}$	1	A
Collector current	$I_C$	0.5	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<sup>2</sup> or more, and the board thickness of 1.7mm for the collector portion

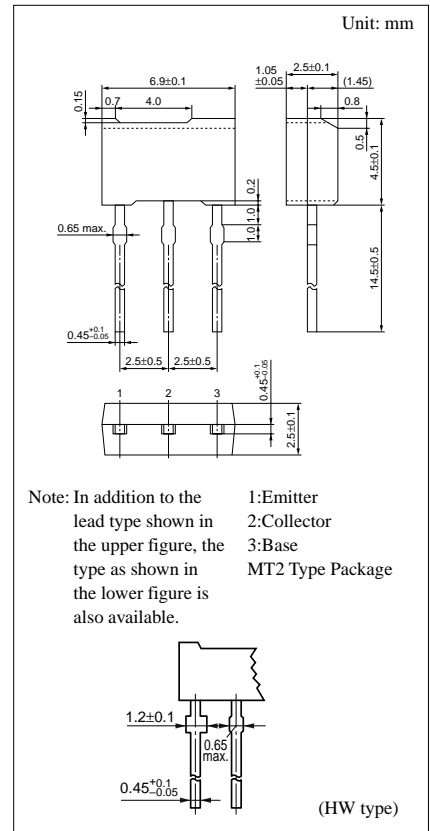
### Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to emitter voltage	$V_{CEO}$	$I_C = 0.1\text{mA}, I_B = 0$	120			V
Emitter to base voltage	$V_{EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	5			V
Forward current transfer ratio	$h_{FE1}^{*1}$	$V_{CE} = 10\text{V}, I_C = 150\text{mA}^{*2}$	90		330	
	$h_{FE2}$	$V_{CE} = 5\text{V}, I_C = 500\text{mA}^{*2}$	50			
	$h_{FE3}$	$V_{CE} = 5\text{V}, I_C = 100\text{mA}^{*2}$	100			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 300\text{mA}, I_B = 30\text{mA}^{*2}$		0.15	1	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 300\text{mA}, I_B = 30\text{mA}^{*2}$		0.9	1.2	V
Transition frequency	$f_T$	$V_{CB} = 10\text{V}, I_E = -50\text{mA}, f = 200\text{MHz}^{*2}$		200		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		11.5	20	pF

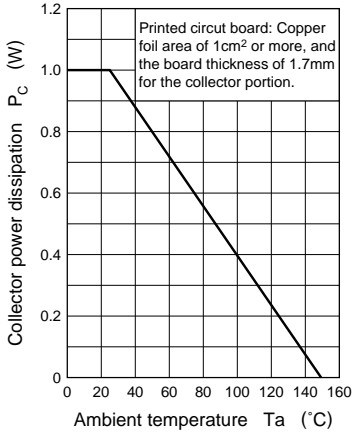
\*2 Pulse measurement

\*1  $h_{FE1}$  Rank classification

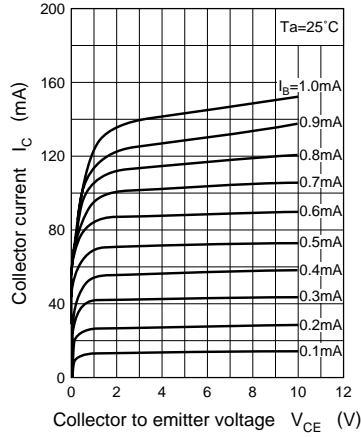
Rank	Q	R	S
$h_{FE1}$	90 ~ 155	130 ~ 220	185 ~ 330



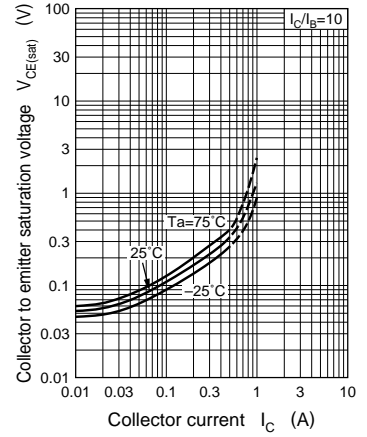
$P_C - T_a$



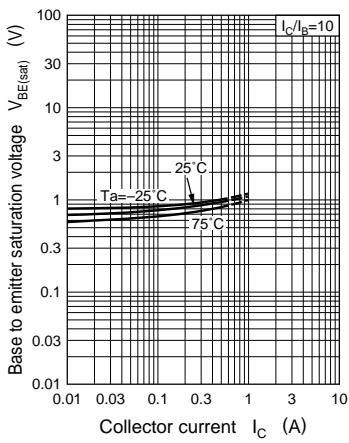
$I_C - V_{CE}$



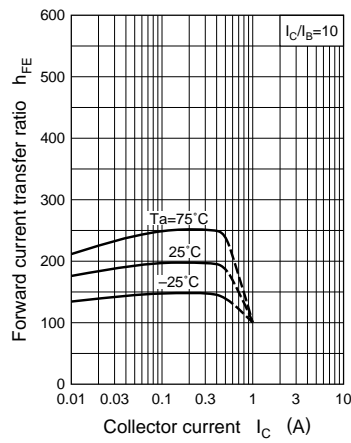
$V_{CE(sat)} - I_C$



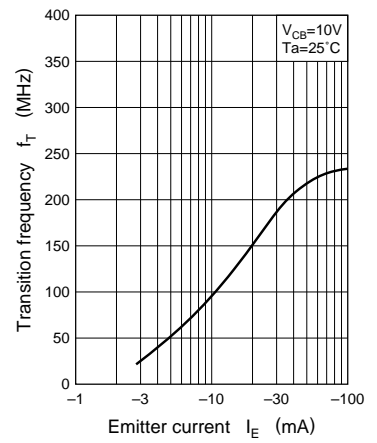
$V_{BE(sat)} - I_C$



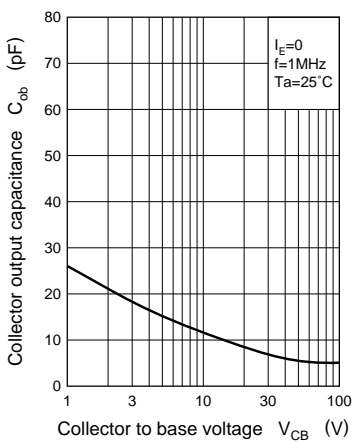
$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$



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