

# 2SC5223

## Silicon NPN triple diffusion planar type

For high-speed switching

### Features

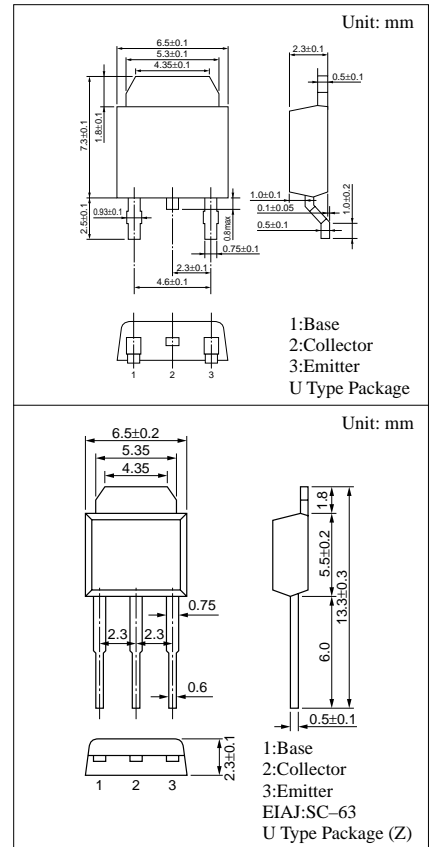
- High collector to base voltage  $V_{CBO}$
- High collector to emitter  $V_{CEO}$

### Absolute Maximum Ratings (Ta=25°C)

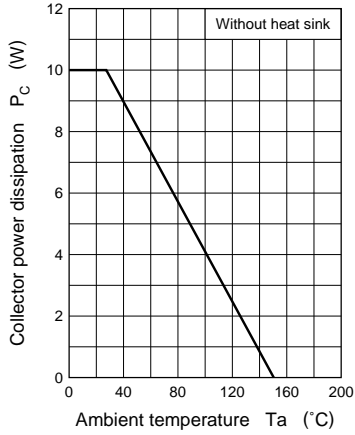
Parameter	Symbol	Rated	Unit
Collector to base voltage	$V_{CBO}$	500	V
Collector to emitter voltage	$V_{CEO}$	500	V
Emitter to base voltage	$V_{EBO}$	7	V
Peak collector current	$I_{CP}$	2.0	A
Collector current	$I_C$	1.0	A
Collector power dissipation (Tc=25°C)	$P_C$	10	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

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

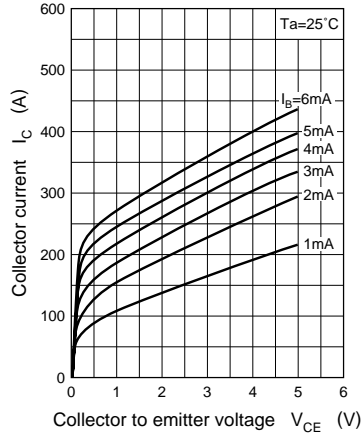
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 400V, I_E = 0$			100	$\mu A$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			10	$\mu A$
Collector to base voltage	$V_{CBO}$	$I_C = 100\mu A, I_E = 0$	500			V
Collector to emitter voltage	$V_{CEO}$	$I_C = 1mA, I_B = 0$	500			V
Emitter to base voltage	$V_{EBO}$	$I_E = 10\mu A, I_C = 0$	7			V
Forward current transfer ratio	$h_{FE1}$	$V_{CE} = 5V, I_C = 50mA$	100			
	$h_{FE2}$	$V_{CE} = 5V, I_C = 330mA$	100			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 330mA, I_B = 33mA$			1.0	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 330mA, I_B = 33mA$			1.5	V



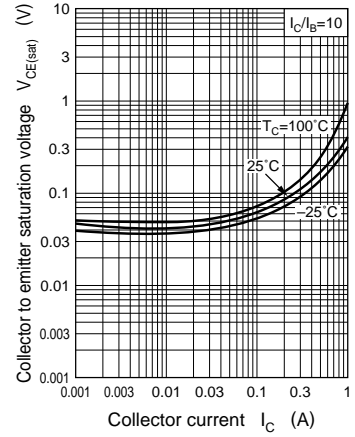
$P_C - T_a$



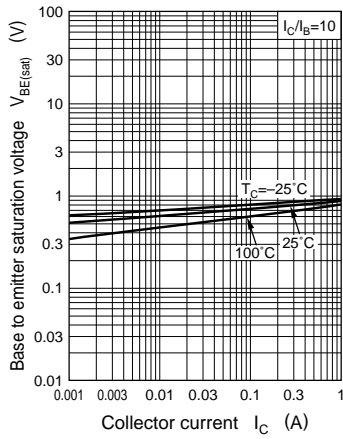
$I_C - V_{CE}$



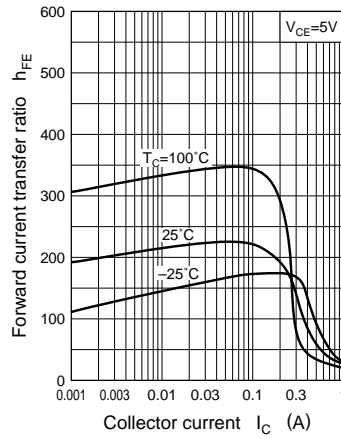
$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



$h_{FE} - I_C$



$C_{ob} - V_{CB}$

