

2SC5223

Silicon NPN triple diffusion planar type

For high-speed switching

Features

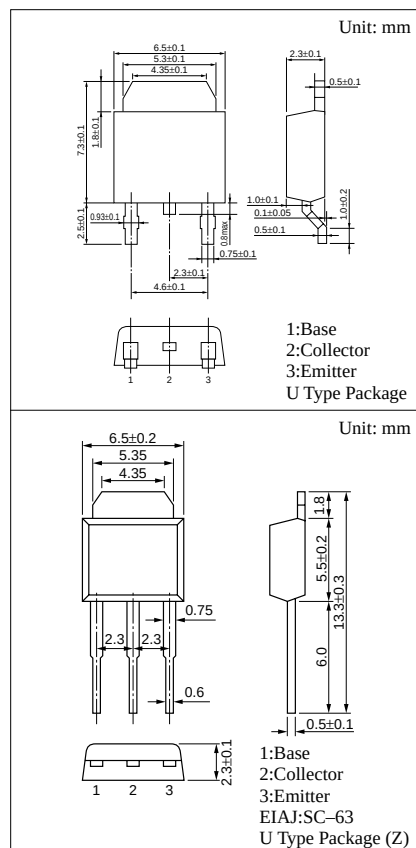
- High collector to base voltage V_{CBO}
- High collector to emitter V_{CEO}

Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

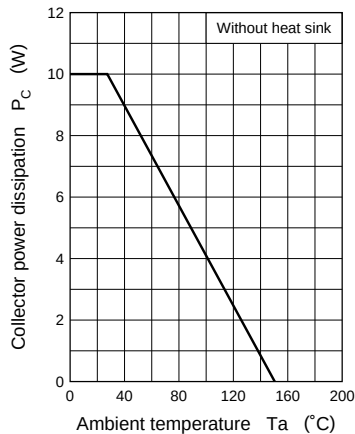
Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	500	V
Collector to emitter voltage	V_{CEO}	500	V
Emitter to base voltage	V_{EBO}	7	V
Peak collector current	I_{CP}	2.0	A
Collector current	I_C	1.0	A
Collector power dissipation ($T_C=25^\circ\text{C}$)	P_C	10	W
Junction temperature	T_j	150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

Electrical Characteristics ($T_a=25^\circ\text{C}$)

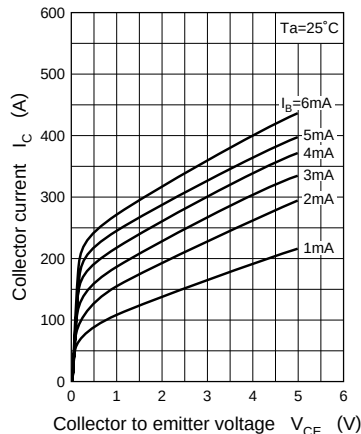
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 400\text{V}$, $I_E = 0$			100	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5\text{V}$, $I_C = 0$			10	μA
Collector to base voltage	V_{CBO}	$I_C = 100\mu\text{A}$, $I_E = 0$	500			V
Collector to emitter voltage	V_{CEO}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



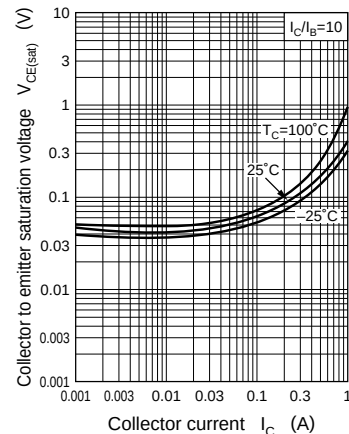
$P_C - T_a$



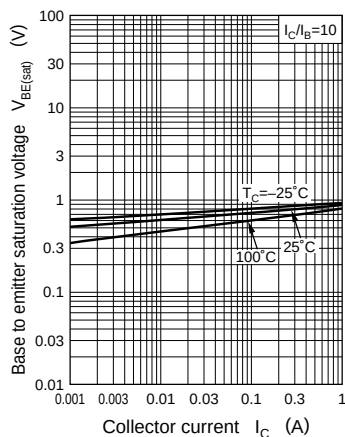
$I_C - V_{CE}$



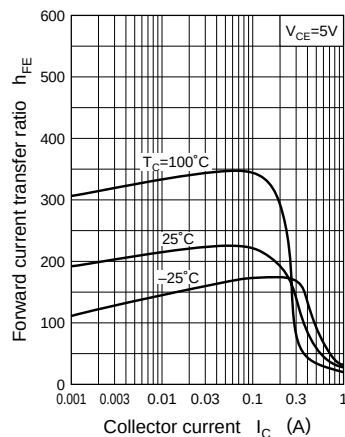
$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



$h_{FE} - I_C$



$C_{ob} - V_{CB}$

