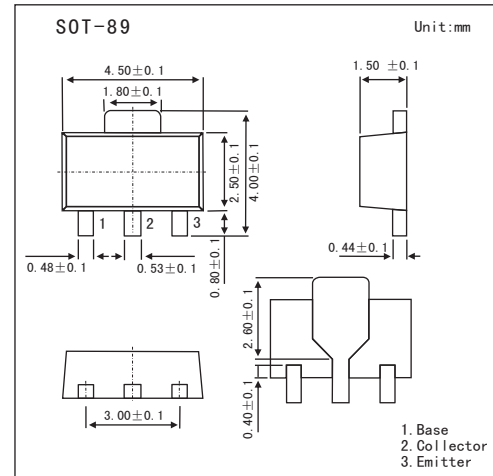


NPN Silicon Epitaxial Transistors

2SD965-Q

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Satisfactory operation performances at high efficiency with the low-voltage power supply.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	40	V
Collector-emitter voltage	V_{CEO}	20	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	5	A
Collector power dissipation	P_C	0.5	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	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}$, $I_E = 0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}$, $I_B = 0$	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}$, $I_C = 0$	7			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 10\text{V}$, $I_E = 0$			0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 7\text{V}$, $I_C = 0$			0.1	μA
DC current gain	h_{FE}	$V_{CE} = 2\text{V}$, $I_C = 0.5\text{A}$	230		380	
		$V_{CE} = 2\text{V}$, $I_C = 2\text{A}$	150			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2\text{A}$, $I_B = 0.1\text{A}$			1	V
Collector output capacitance	C_{ob}	$V_{CB} = 20\text{V}$, $I_E = 0$, $f = 1\text{MHz}$			50	pF
Transition frequency	f_T	$V_{CB} = 6\text{V}$, $I_C = 50\text{mA}$		150		MHz

■ Marking

Marking	D965Q
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2SD965-Q

Electrical Characteristics Curves

