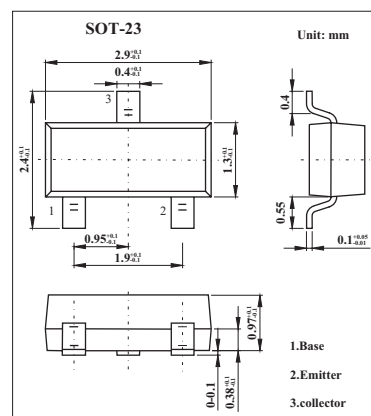


Silicon NPN Epitaxial Planar Type

2SD602

■ Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CEO}	25	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	500	mA
Peak collector current	I_{CP}	1	A
Collector power dissipation	P_C	200	mW
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	Testconditions	Min	Typ	Max	Unit
Collector-base voltage	V_{CBO}	$I_C = 10\ \mu\text{A}, I_E = 0$	30			V
Collector-emitter voltage	V_{CEO}	$I_C = 10\ \text{mA}, I_B = 0$	25			V
Emitter-base voltage	V_{EBO}	$I_E = 10\ \mu\text{A}, I_C = 0$	5			V
Collector-base cutoff current	I_{CBO}	$V_{CB} = 20\ \text{V}, I_E = 0$			0.1	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 10\ \text{V}, I_C = 150\ \text{mA}$	85	160	340	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 300\ \text{mA}, I_B = 30\ \text{mA}$		0.35	0.6	V
Transition frequency	f_T	$V_{CB} = 10\ \text{V}, I_E = -50\ \text{mA}, f = 200\ \text{MHz}$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\ \text{V}, I_E = 0, f = 1.0\ \text{MHz}$		6	15	pF

■ h_{FE} Classification

Marking	WQ	WR	WS
h_{FE}	85~170	120~240	170~340