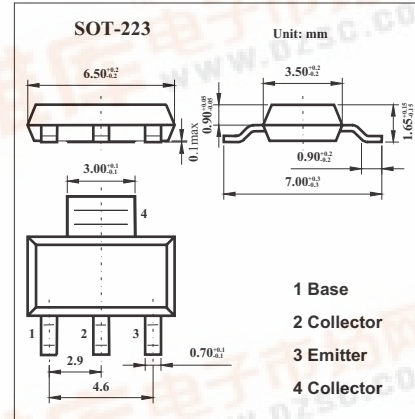


SMD Type Transistors

NPN Silicon Epitaxial Transistor
BSP19A

Features

- High Voltage: $V_{(BR)CEO}$ of 250 and 350 Volts.
- Available in 12 mm Tape and Reel



Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector-Emitter Voltage (Open Base)	V_{CEO}	350	V
Collector-Base Voltage (Open Emitter)	V_{CBO}	400	V
Emitter-Base Voltage (Open Collector)	V_{EBO}	5	V
Collector Current (DC)	I_c	1000	mA
Total Power Dissipation @ $T_a = 25^\circ C^*$	P_D	0.8	Watts
Derate above $25^\circ C$		6.4	mW/ $^\circ C$
Storage Temperature Range	T_{stg}	-65 to 150	$^\circ C$
Junction Temperature	T_J	150	$^\circ C$
Thermal Resistance from Junction-to-Ambient	$R_{\theta JA}$	156	$^\circ C/W$
Maximum Temperature for Soldering Purposes	T_L	260	$^\circ C$
Time in Solder Bath		10	Sec

* Device mounted on a FR-4 glass epoxy printed circuit board using minimum recommended footprint.

Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_c = 1.0\text{ mA}, I_B = 0$	350			V
Collector-Base Cutoff Current	I_{CBO}	$V_{CB} = 400\text{ V}, I_E = 0$			20	nA
Emitter-Base Cutoff Current	I_{EBO}	$V_{EB} = 5.0\text{ V}, I_c = 0$			10	mA
DC Current Gain *	h_{FE}	$I_c = 20\text{ mA}, V_{CE} = 10\text{ V}$	40			
Current-Gain □ Bandwidth Product *	f_T	$I_c = 10\text{ mA}, V_{CE} = 10\text{ V}, f = 5.0\text{ MHz}$	70			MHz
Collector-Emitter Saturation Voltage *	$V_{CE(sat)}$	$I_c = 50\text{ mA}, I_B = 4.0\text{ mA}$			0.5	V
Base-Emitter Saturation Voltage *	$V_{BE(sat)}$	$I_c = 50\text{ mA}, I_B = 4.0\text{ mA}$			1.3	V

* Pulse Test: Pulse Width $\leq 300\ \mu s$, Duty Cycle = 2.0%

Marking

Marking	SP19A
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