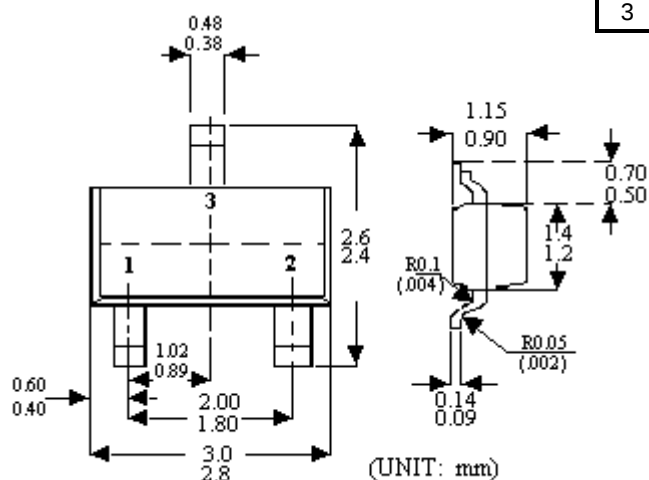


NPN Silicon Planar Epitaxial Transistor

Dimensions SOT-23



1	BASE
2	EMITTER
3	COLLECTOR

Absolute Maximum Ratings (Ta=25°C unless specified otherwise)

Desription	SYMBOL	VALUE	UNITS
Collector-Emitter Voltage ($V_{BE} = 0V$)	V_{CES}	50	V
Collector Emitter Voltage (open base) $I_C = 10mA$	V_{CEO}	45	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	500	mA
Collector Current - Peak	I_{CM}	1000	mA
Emitter Current - Peak	$(-I_{EM})$	1000	mA
Base Current - (DC)	I_B	100	mA
Base Current - Peak	I_{BM}	200	mA
Total Power Dissipation up to $T_{amb} = 25^\circ C$	P_{tot}	250	mW
Storage Temperature	T_{stg}	(-55 to +150)	°C
Junction Temperature	T_J	150	°C

Thermal Resistance

From junction to ambient	$R_{th(j-a)}$	500	k / W
--------------------------	---------------	-----	-------

Electical Characteristics (at $T_a = 25^{\circ}\text{C}$ unless otherwise specified)

	Symbol	Test Conditions		Typ.	Unit
Collector Cut off Current	I_{CBO}	$V_{CB} = 20\text{V}, I_E = 0, T_J = 25^{\circ}\text{C}$	<	100	nA
		$V_{CB} = 20\text{V}, I_E = 0, T_J = 150^{\circ}\text{C}$	<	5	μA
Emitter cut-off current	I_{EBO}	$I_C = 0, V_{EB} = 5\text{V}$	<	10	μA
Base Emitter on Voltage	V_{BE}	$I_C = 500\text{ mA}, V_{CE} = 1\text{V}$	<	1, 2V	V
Saturation Voltage	V_{CEsat}	$I_C = 500\text{ mA}, I_B = 50\text{mA}$	<	700	mV
DC Current Gain	h_{FE}	$I_C = 500\text{ mA}, V_{CE} = 1\text{V}$	>	40	
		$I_C = 100\text{ mA}, V_{CE} = 1\text{V}$	-	100 to 600	
Collector Capacitance	C_C	$I_E = I_E = 0, V_{CB} = 10\text{V},$ $f = 1\text{MHz}$	typ.	5	pF
Transition Frequency	f_T	$I_C = 10\text{mA}, V_{CE} = 5\text{V},$ $f = 100\text{MHz}$	>	100	MHz