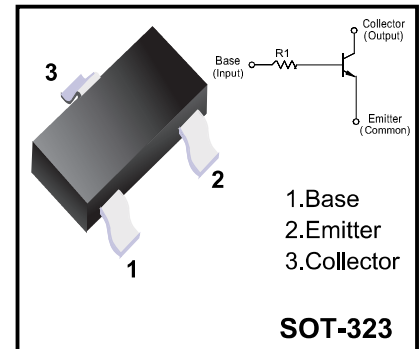


NPN Silicon Epitaxial Planar Transistor

for switching and interface circuit
and drive circuit applications

FEATURES

- ◆With built-in bias resistors
- ◆Simplify circuit design
- ◆Reduce a quantity of parts and manufacturing process



Resistor Values

Type	R1 (KΩ)			Marking Code
	Min.	Typ.	Max.	
MMBTRC110SSW	3.29	4.7	6.11	XD
MMBTRC111SSW	7	10	13	XE
MMBTRC112SSW	70	100	130	XF
MMBTRC113SSW	15.4	22	28.6	XH
MMBTRC114SSW	32.9	47	61.1	XJ

Absolute Maximum Ratings (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	50	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_s	- 55 to + 150	°C

Characteristics at Ta = 25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 5\text{ V}$, $I_C = 1\text{ mA}$	h_{FE}	120	-	-	-
Collector Cutoff Current at $V_{CB} = 50\text{ V}$	I_{CBO}	-	-	100	nA
Emitter Cutoff Current at $V_{EB} = 5\text{ V}$	I_{EBO}	-	-	100	nA
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$, $I_B = 0.5\text{ mA}$	$V_{CE(sat)}$	-	-	0.3	V
Transition Frequency at $V_{CE} = 10\text{ V}$, $I_C = 5\text{ mA}$	f_T	-	250	-	MHz

Ordering information

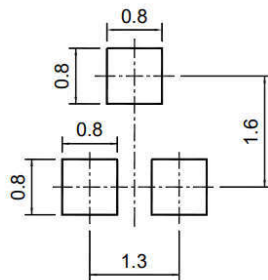
Package	Packing Description	Base Quantity	Packing Quantity
SOT-323	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-323

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.8	1.1	32	43
A1	0.1		4	
bp	0.3	0.4	12	16
C	0.10	0.25	4	10
D	1.8	2.2	71	87
E	1.15	1.35	45	53
E	1.3		51	
E1	0.65		26	
HE	2.0	2.2	79	87
Lp	0.15	0.45	6	18
Q	0.13	0.23	5.1	9
v	0.2		8	
W	0.2		8	

The recommended mounting pad size



Disclaimer

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