

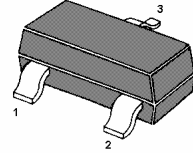
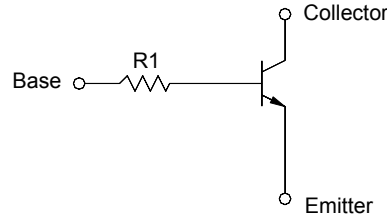
MMBTRC110SS...MMBTRC114SS

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



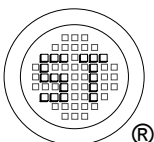
1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

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

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	$^\circ\text{C}$
Storage Temperature Range	T_s	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25\text{ }^\circ\text{C}$

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
Input Resistor	MMBTRC110SS	-	4.7	-	K Ω
	MMBTRC111SS	-	10	-	
	MMBTRC112SS	-	100	-	
	MMBTRC113SS	-	22	-	
	MMBTRC114SS	-	47	-	



SEMTECH ELECTRONICS LTD.

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ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 7116



ISO 9001:2000
Certificate No. 0506098