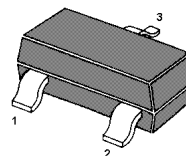
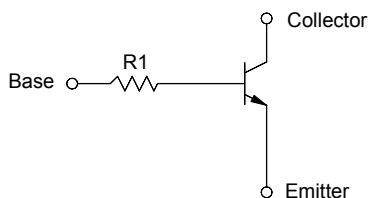


MMBTRC231S...MMBTRC234S

NPN Silicon Epitaxial Planar Transistor

For switching, audio muting, interface circuit and driver circuit applications



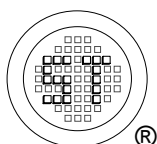
1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	30	V
Collector Emitter Voltage	V_{CEO}	15	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	600	mA
Total 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 $V_{CE} = 5\text{ V}$, $I_C = 50\text{ mA}$	h_{FE}	200	-	800	-
Collector Base Breakdown Voltage at $I_C = 50\text{ }\mu\text{A}$	$V_{(BR)CBO}$	30	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	15	-	-	V
Emitter Base Breakdown Voltage at $I_E = 50\text{ }\mu\text{A}$	$V_{(BR)EBO}$	5	-	-	V
Collector Base Cutoff Current at $V_{CB} = 30\text{ V}$	I_{CBO}	-	-	0.5	μA
Collector Emitter Saturation Voltage at $I_C = 50\text{ mA}$, $I_B = 2.5\text{ mA}$	$V_{CE(sat)}$	-	-	80	mV
Transition Frequency at $V_{CE} = 10\text{ V}$, $-I_E = 50\text{ mA}$, $f = 100\text{ MHz}$	f_T	-	200	-	MHz
Input Resistor					
	MMBTRC231S		2.2		
	MMBTRC233S	R1	10	-	K Ω
	MMBTRC234S		4.7		



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 7116



ISO 9001:2000
Certificate No. 0506098

Dated : 07/07/2008