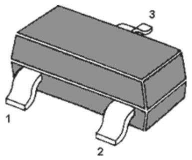
MMBTRC231SS...MMBTRC234SS

NPN Silicon Epitaxial Planar Transistor

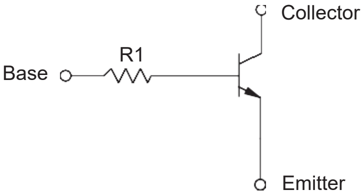
For switching, audio muting, interface
circuit and driver circuit applications



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

Resistor Values & Marking

Type	R1 (KΩ)	Marking Code
MMBTRC231SS	2.2	R.J
MMBTRC233SS	10	R.O
MMBTRC234SS	4.7	R.Q



Absolute Maximum Ratings (T_a = 25 °C)

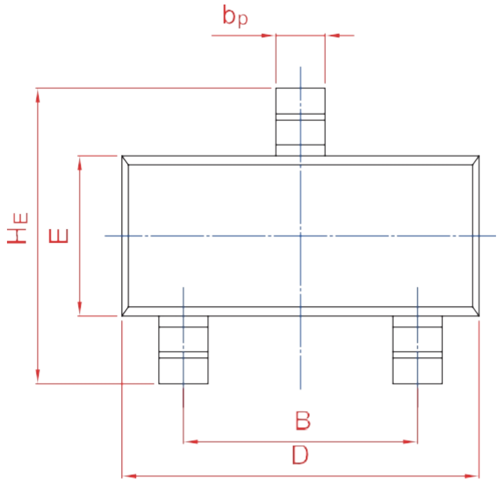
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	30	V
Collector Emitter Voltage	V_{CEO}	15	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

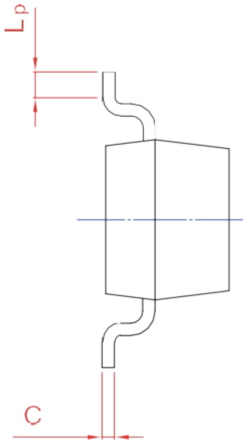
Characteristics at T_a = 25 °C

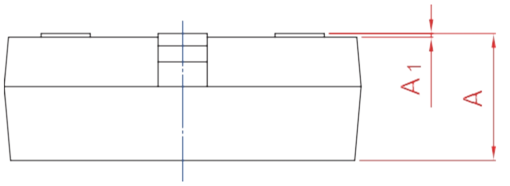
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 5 V, I_C = 1 mA	h_{FE}	100	-	600	-
Collector Base Breakdown Voltage at I_C = 50 µA	$V_{(BR)CBO}$	30	-	-	V
Collector Emitter Breakdown Voltage at I_C = 1 mA	$V_{(BR)CEO}$	15	-	-	V
Emitter Base Breakdown Voltage at I_E = 50 µA	$V_{(BR)EBO}$	5	-	-	V
Collector Base Cutoff Current at V_{CB} = 30 V	I_{CBO}	-	-	0.5	µA
Collector Emitter Saturation Voltage at I_C = 10 mA, I_B = 0.5 mA	$V_{CE(sat)}$	-	-	0.3	V
Transition Frequency at V_{CE} = 10 V, $-I_E$ = 5 mA, f = 100 MHz	f_T	-	250	-	MHz

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads **SOT-23**







UNIT	A	B	b_p	C	D	E	H_E	A_1	L_p
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20