



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

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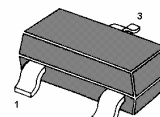
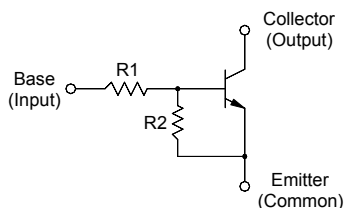
MMBTRC107SS...MMBTRC109SS

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



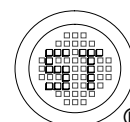
1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

Resistor Values

Type	R1 (KΩ)	R2 (KΩ)
MMBTRC107SS	10	47
MMBTRC108SS	22	47
MMBTRC109SS	47	22

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Output Voltage	V _o	50	V
Input Voltage	V _i	30, -6	V
		40, -7	
		40, -15	
Output Current	I _o	100	mA
Total Power Dissipation	P _{tot}	200	mW
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _s	- 55 to + 150	°C



Dated : 13/04/2007



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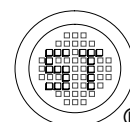
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MMBTRC107SS...MMBTRC109SS

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_o = 5\text{ V}$, $I_o = 10\text{ mA}$	G_I	80	-	-	-
MMBTRC107SS		80	-	-	-
MMBTRC108SS		70	-	-	-
Output Cutoff Current at $V_o = 50\text{ V}$	$I_{O(OFF)}$	-	-	500	nA
Input Current at $V_i = 5\text{ V}$	I_i	-	-	0.88	mA
MMBTRC107SS		-	-	0.36	
MMBTRC108SS		-	-	0.16	
Output Voltage at $I_o = 10\text{ mA}$, $I_i = 0.5\text{ mA}$	$V_{O(ON)}$	-	-	0.3	V
Input Voltage (ON) at $V_o = 0.2\text{ V}$, $I_o = 5\text{ mA}$	$V_{I(ON)}$	-	-	1.8	V
MMBTRC107SS		-	-	2.6	
MMBTRC108SS		-	-	5.8	
Input Voltage (OFF) at $V_o = 5\text{ V}$, $I_o = 0.1\text{ mA}$	$V_{I(OFF)}$	0.5	-	-	V
MMBTRC107SS		0.6	-	-	
MMBTRC108SS		1.5	-	-	
Transition Frequency at $V_o = 10\text{ V}$, $I_o = 5\text{ mA}$	$f_T^{1)}$	-	200	-	MHz

¹⁾ Characteristic of transistor only.



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