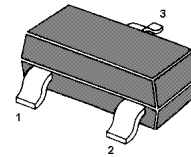


# MMBTSC5084

## NPN Silicon Epitaxial Planar Transistor

for low noise, high gain amplifier at VHF~UHF band.

The transistor is subdivided into two groups O and Y, according to its DC current gain.



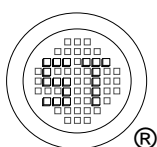
1. Base 2. Emitter 3. Collector  
TO-236 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	20	V
Collector Emitter Voltage	$V_{CEO}$	12	V
Emitter Base Voltage	$V_{EBO}$	3	V
Base Current	$I_B$	40	mA
Collector Current	$I_C$	80	mA
Power Dissipation	$P_{tot}$	200	mW
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 125	$^\circ\text{C}$

### Characteristics at $T_{amb}=25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $V_{CE} = 10\text{ V}$ , $I_C = 20\text{ mA}$	Current Gain Group O	$h_{FE}$	80	-	160	-
	Current Gain Group Y	$h_{FE}$	120	-	240	-
Collector Base Cutoff Current at $V_{CB} = 10\text{ V}$	$I_{CBO}$	-	-	1	$\mu\text{A}$	
Emitter Base Cutoff Current at $V_{EB} = 1\text{ V}$	$I_{EBO}$	-	-	1	$\mu\text{A}$	
Collector Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)CBO}$	20	-	-	V	
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	12	-	-	V	
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	3	-	-	V	
Transition Frequency at $V_{CE} = 10\text{ V}$ , $I_C = 20\text{ mA}$	$f_T$	-	7	-	GHz	
Output Capacitance at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	1	-	pF	



**SEMTECH ELECTRONICS LTD.**



Dated: 16/03/2015 Rev: 01