



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.

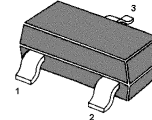
TEL: 852-2790 0314 FAX: 852-2790 0206

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.

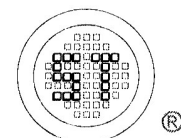


1. Base 2. Emitter 3. Collector

SOT-23 Plastic Package

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

	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_s	-55 to +125	$^\circ\text{C}$



SEMTECH

Dated : 20/10/2005



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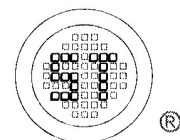
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Characteristics at $T_{amb}=25\text{ }^{\circ}\text{C}$

	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	-
	Y	h_{FE}	120	-	240	-
Collector Cutoff Current at $V_{CB}=10\text{V}$	I_{CBO}	-	-	1	μA	
Emitter Cutoff Current at $V_{EB}=1.0\text{V}$	I_{EBO}	-	-	1	μA	
Transition Frequency at $V_{CE}=10\text{V}$, $I_C=20\text{mA}$	f_T	5	7	-	GHz	
Reverse Transfer Capacitance at $V_{CB}=10\text{V}$, $f=1\text{MHz}$ ¹⁾	C_{re}	-	0.65	1.15	pF	
Output Capacitance at $V_{CB}=10\text{V}$, $f=1\text{MHz}$ ¹⁾	C_{ob}	-	1	-	pF	
Insertion Gain at $V_{CE}=10\text{V}$, $I_C=20\text{mA}$, $f=500\text{MHz}$	$ S_{21e} ^2_1$	-	16.5	-	dB	
Insertion Gain at $V_{CE}=10\text{V}$, $I_C=20\text{mA}$, $f=1.0\text{GHz}$	$ S_{21e} ^2_2$	7.5	11	-	dB	
Noise Figure at $V_{CE}=10\text{V}$, $I_C=5\text{mA}$, $f=500\text{MHz}$	NF_1	-	1	-	dB	
Noise Figure at $V_{CE}=10\text{V}$, $I_C=5\text{mA}$, $f=1.0\text{GHz}$	NF_2	-	1.1	2	dB	

¹⁾ C_{re} is measured by 3 terminal method with capacitance bridge.



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