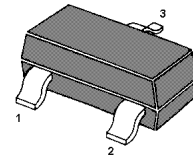


MMBTSC930 NPN Silicon Epitaxial Planar Transistor

for FM RF amp, mixer, osc, converter and IF amplifier.

On special request, these transistors can be manufactured in different pin configurations.



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}	30	V
Collector Emitter Voltage	V_{CEO}	20	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	30	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +125	$^\circ\text{C}$

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

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE}=6\text{V}$, $I_C=1\text{mA}$					
Current Gain Group C	h_{FE}	40	-	80	-
D	h_{FE}	60	-	120	-
E	h_{FE}	100	-	200	-
F	h_{FE}	160	-	320	-
Collector Cutoff Current at $V_{CB}=10\text{V}$	I_{CBO}	-	-	1	μA
Emitter Cutoff Current at $V_{EB}=4\text{V}$	I_{EBO}	-	-	1	μA
Gain Bandwidth Product at $V_{CE}=6\text{V}$, $I_C=1\text{mA}$	f_T	170	300	-	MHz
Reverse Transfer Capacitance at $V_{CB}=6\text{V}$, $f=1\text{MHz}$	C_{re}	1	1.3	1.8	pF
Base to Collector Time Constant at $V_{CB}=6\text{V}$, $I_C=1\text{mA}$, $f=31.9\text{MHz}$	$R_{bb} \cdot C_c$	-	20	36	ps
Noise Figure at $V_{CB}=6\text{V}$, $I_C=1\text{mA}$, $f=100\text{MHz}$	NF	-	4	-	dB
Turn-on Time at $V_{IN}=+12\text{V}$, $V_{BE}=-3\text{V}$, appointed circuit	t_{on}	-	30	-	ns
Turn-off Time at $V_{IN}=-12\text{V}$, $V_{BE}=+3\text{V}$, appointed circuit	t_{off}	-	30	-	ns

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23

