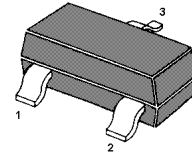


NPN Silicon Epitaxial Planar Transistor

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

The transistor is subdivided into four groups, C, D, E and F, according to its DC current gain.

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_{Stg}	-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	40	-	80	-
	D	60	-	120	-
	E	100	-	200	-
	F	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