

Silicon NPN RF Transistor

2SC5772

DESCRIPTION

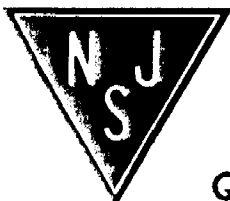
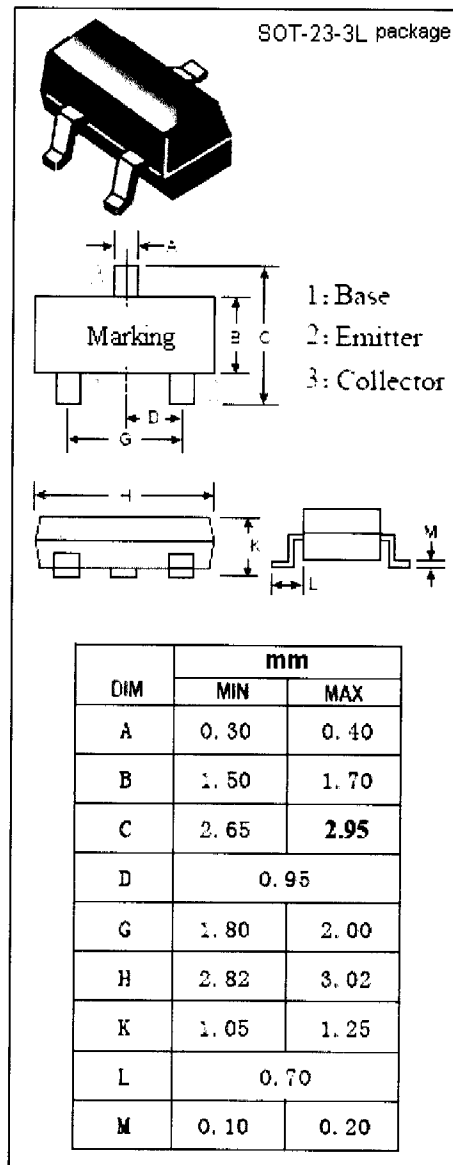
- High Gain Bandwidth Product
 $f_T = 9 \text{ GHz TYP.}$
- High power gain and low noise figure ;
 $PG = 13 \text{ dB TYP., NF} = 1.1 \text{ dB typ. @ } f = 900 \text{ MHz}$

APPLICATIONS

- Designed for use in UHF ~ VHF wide band amplifier.

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	15	V
V_{CEO}	Collector-Emitter Voltage	9	V
V_{EBO}	Emitter-Base Voltage	1.5	V
I_C	Collector Current-Continuous	75	mA
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	0.7	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{sig}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = 10 \mu\text{A}; I_E = 0$	15			V
I_{CBO}	Collector Cutoff Current	$V_{CB} = 12\text{V}; I_E = 0$			1	μA
I_{CEO}	Collector Cutoff Current	$V_{CE} = 9\text{V}; R_{BE} = \infty$			1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 1.5\text{V}; I_C = 0$			10	μA
h_{FE}	DC Current Gain	$I_C = 20\text{mA}; V_{CE} = 5\text{V}$	80		160	
f_T	Current-Gain—Bandwidth Product	$I_C = 20\text{mA}; V_{CE} = 5\text{V}; f = 1\text{GHz}$	6	9		GHz
C_{OB}	Output Capacitance	$I_E = 0; V_{CB} = 5\text{V}; f = 1.0\text{MHz}$		0.9	1.5	pF
C_{re}	Reverse Transfer Capacitance	$I_E = 0; V_{CB} = 5\text{V}; f = 1.0\text{MHz}$		0.7		pF
$ S_{21e} ^2$	Insertion Power Gain	$I_C = 20\text{mA}; V_{CE} = 5\text{V}; f = 1\text{GHz}$		11.8		dB
PG	Power Gain	$I_C = 20\text{mA}; V_{CC} = 5\text{V}; f = 900\text{MHz}$	9.5	13		dB
NF	Noise Figure	$I_C = 5\text{mA}; V_{CC} = 5\text{V}; f = 900\text{MHz}$		1.1	1.9	dB

