

isc Silicon NPN RF Transistor
2SC3123
DESCRIPTION

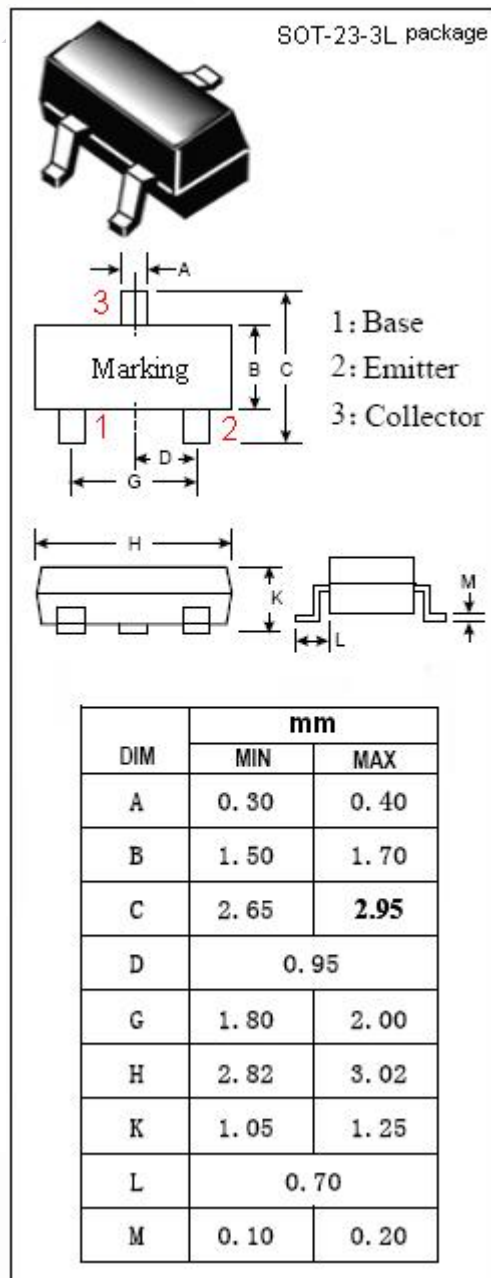
- High Conversion Gain
 $G_{ce} = 23\text{dB TYP.}$
- Low Reverse Transfer Capacitance
 $C_{re} = 0.4\text{pF TYP.}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for TV VHF mixer applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	3	V
I_C	Collector Current-Continuous	50	mA
I_B	Base Current-Continuous	25	mA
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	0.15	W
T_J	Junction Temperature	125	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~125	$^\circ\text{C}$



isc Silicon NPN RF Transistor

2SC3123

ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 1mA ; I _B = 0	20			V
I _{CBO}	Collector Cutoff Current	V _{CB} = 25V; I _E = 0			0.1	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 3V; I _C = 0			1.0	μ A
h _{FE}	DC Current Gain	I _C = 5mA ; V _{CE} = 10V	40		300	
C _{re}	Reverse Transfer Capacitance	I _E = 0 ; V _{CB} = 10V;f= 1.0MHz		0.4	0.5	pF
f _T	Current-Gain—Bandwidth Product	I _C = 5mA ; V _{CE} = 10V	900	1400		MHz
G _{ce}	Conversion Gain	V _{CC} = 12V;f= 200MHz,f _L = 260MHz	20	23		dB
NF	Noise Figure	V _{CC} = 12V;f= 200MHz,f _L = 260MHz		3.8	5.5	dB

NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.