

isc Silicon NPN RF Transistor

FSC520

DESCRIPTION

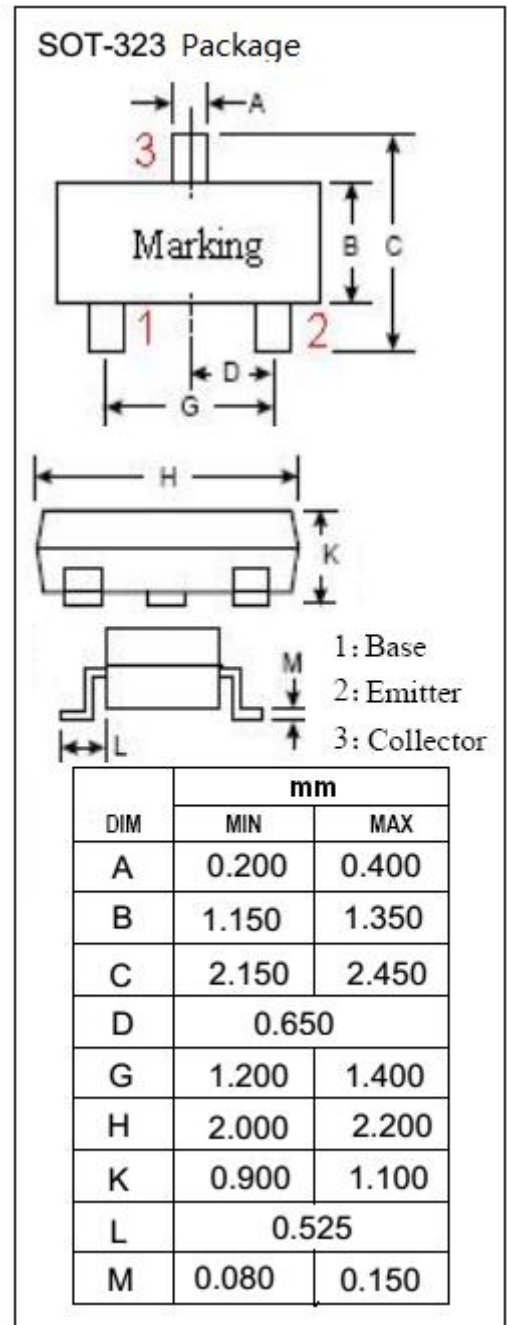
- Low Noise and High Gain
NF = 1.5 dB TYP
@ $V_{CE} = 6V$, $I_C = 5\text{ mA}$, $f = 1.0\text{ GHz}$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for low noise amplifier at VHF, UHF

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	20	V
V_{CEO}	Collector-Emitter Voltage	12	V
V_{EBO}	Emitter-Base Voltage	2.0	V
I_C	Collector Current-Continuous	0.1	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	150	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I _{CBO}	Collector Cutoff Current	V _{CB} = 10V; I _E = 0			0.1	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 1V; I _C = 0			0.1	μ A
h _{FE}	DC Current Gain	I _C = 20mA ; V _{CE} = 6V	90		250	
f _T	Current-Gain—Bandwidth Product	I _C = 20mA ; V _{CE} = 6V		8		GHz
C _{re}	Feed-Back Capacitance	I _E = 0 ; V _{CB} = 6V;f= 1.0MHz		0.4	0.7	pF
S _{21e} ²	Insertion Power Gain	I _C = 20mA ; V _{CE} = 6V;f= 1.0GHz		12.5		dB
NF	Noise Figure	I _C = 5mA ; V _{CE} = 6V;f= 1.0GHz		1.5	2	dB

◆ h_{FE} Classification

Marking	B	C	D
h _{FE}	90-130	120-180	170-250

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