

isc Silicon NPN RF Transistor
BFS67
DESCRIPTION

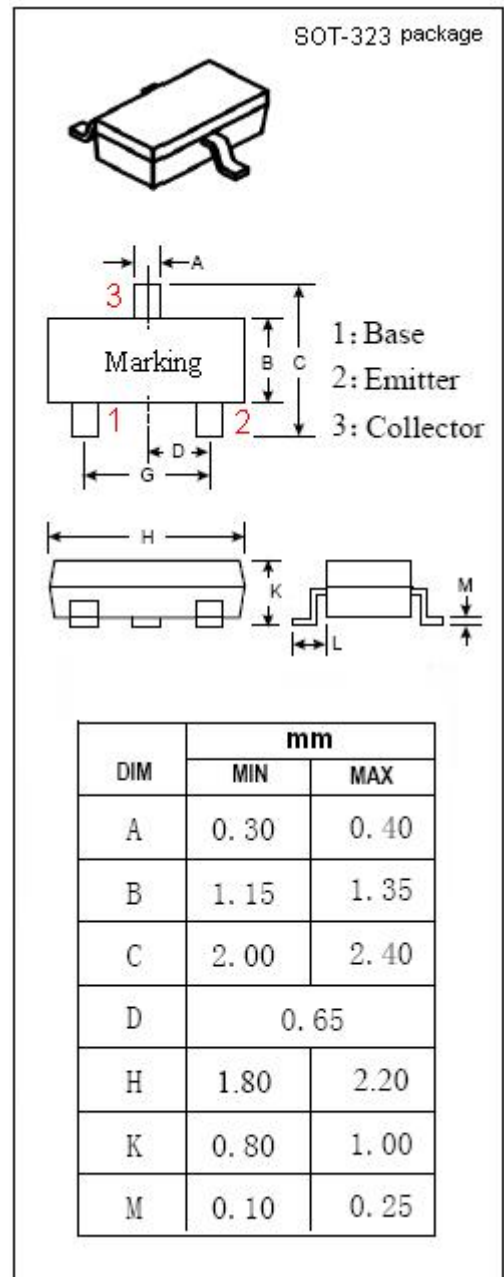
- Low Noise Figure
NF = 4.5 dB TYP. @ $V_{CE} = 5\text{ V}$, $I_C = 2\text{ mA}$, $f = 500\text{ MHz}$
- High Current-Gain—Bandwidth Product
 $f_T = 1\text{ GHz}$ TYP. @ $V_{CE} = 5\text{ V}$, $I_C = 2\text{ mA}$, $f = 500\text{ MHz}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- For a wide range of RF applications such as: mixers and oscillators in TV tuners and RF communications equipment.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	25	V
V_{CEO}	Collector-Emitter Voltage	15	V
V_{EBO}	Emitter-Base Voltage	2.5	V
I_C	Collector Current-Continuous	25	mA
I_{CM}	Collector Current-Peak	50	mA
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	0.3	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$



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			0.01	μ A
h _{FE-1}	DC Current Gain	I _C = 2mA ; V _{CE} = 1V	25			
h _{FE-2}	DC Current Gain	I _C = 25mA ; V _{CE} = 1V	25			
f _T	Current-Gain—Bandwidth Product	I _C = 2mA ; V _{CE} = 5V; f= 500MHz		1		GHz
f _T	Current-Gain—Bandwidth Product	I _C = 25mA ; V _{CE} = 5V; f= 500MHz		1.6		GHz
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 10V; f= 1MHz		0.8	1.5	pF
C _{re}	Feedback Capacitance	I _C = 1mA ; V _{CB} = 5V; f= 1MHz		0.65		pF
NF	Noise Figure	I _C = 2mA ; V _{CE} = 5V; R _S = 50 Ω f= 500MHz		4.5		dB

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