isc Silicon NPN RF Transistor — BFS67

DESCRIPTION

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

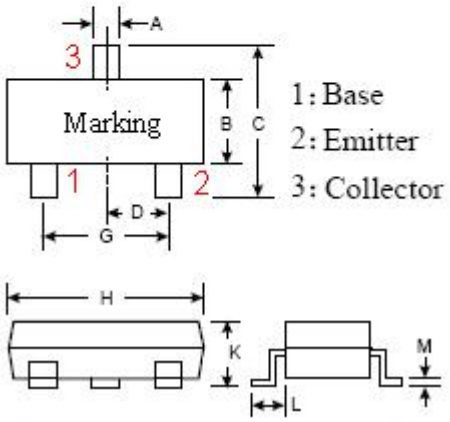
APPLICATIONS

- 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℃)

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℃	0.3	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

SOT-323 package



DIM	mm	
	MIN	MAX
A	0.30	0.40
B	1.15	1.35
C	2.00	2.40
D	0.65	
H	1.80	2.20
K	0.80	1.00
M	0.10	0.25

isc Silicon NPN RF Transistor BFS67

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I_{CBO}	Collector Cutoff Current	V_{CB}= 10V; I_E= 0			0.01	μA
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= 50Ω f= 500MHz		4.5		dB