

isc Silicon NPN RF Transistor

BFR520

DESCRIPTION

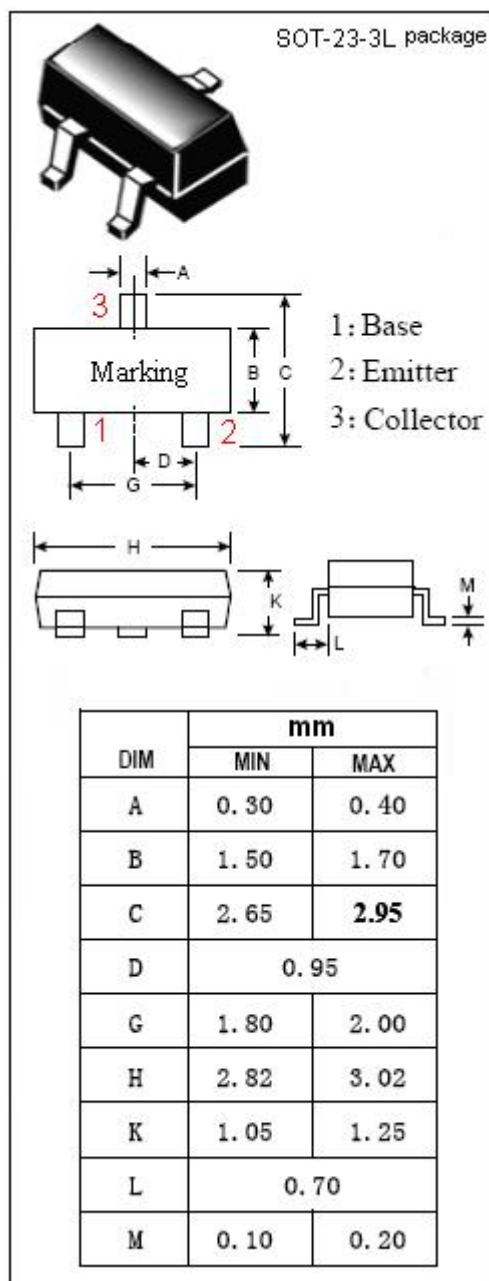
- High Power Gain
- High Current Gain Bandwidth Product
- Low Noise Figure
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for RF frontend in wideband applications in the GHz range, such as analog and digital cellular telephones, cordless.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	20	V
V_{CES}	Collector-Emitter Voltage	15	V
V_{EBO}	Emitter-Base Voltage	2.5	V
I_C	Collector Current-Continuous	70	mA
P_C	Collector Power Dissipation @ $T_c=25^{\circ}\text{C}$	0.3	W
T_J	Junction Temperature	175	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^{\circ}\text{C}$



isc Silicon NPN RF Transistor**BFR520****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I _{CBO}	Collector Cutoff Current	V _{CB} = 6V; I _E = 0			0.05	μ A
h _{FE}	DC Current Gain	I _C = 20mA ; V _{CE} = 6V	60		250	
f _T	Current-Gain—Bandwidth Product	I _C = 20mA ; V _{CE} = 6V; f= 1GHz		9		GHz
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 6V; f= 1MHz		0.5		pF
PG	Power Gain	I _C = 20mA ; V _{CE} = 6V; f= 900MHz		15		dB
PG	Power Gain	I _C = 20mA ; V _{CE} = 6V; f= 2GHz		9		dB
S _{21e} ²	Insertion Power Gain	I _C = 20mA ; V _{CE} = 6V; f= 900MHz	13	14		dB
NF	Noise Figure	I _C = 5mA ; V _{CE} = 6V; f= 900MHz		1.1	1.6	dB
NF	Noise Figure	I _C = 20mA ; V _{CE} = 6V; f= 900MHz		1.6	2.1	dB

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