

INCHANGE Semiconductor

isc RF Product Specification

isc Silicon NPN RF Transistor

2SC4537

DESCRIPTION

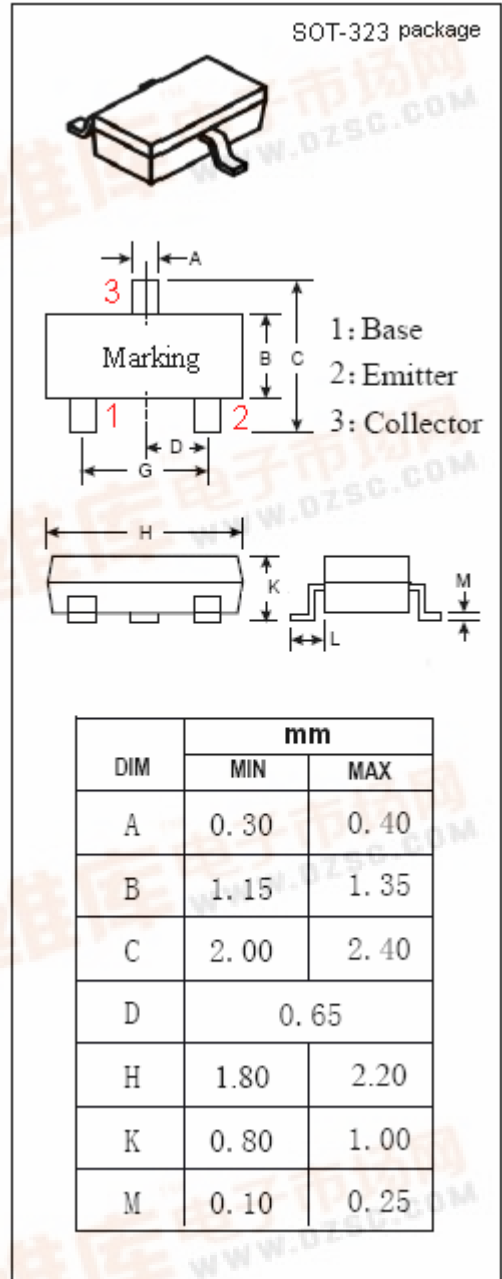
- Low Noise  
 $NF = 1.6 \text{ dB TYP.}, @V_{CE} = 5 \text{ V}, I_C = 5 \text{ mA}, f = 900 \text{ MHz}$
- High Power Gain  
 $PG = 10 \text{ dB TYP.}, @V_{CE} = 5 \text{ V}, I_C = 20 \text{ mA}, f = 900 \text{ MHz}$

APPLICATIONS

- Designed for VHF, UHF low noise amplifier.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	15	V
$V_{CEO}$	Collector-Emitter Voltage	11	V
$V_{EBO}$	Emitter-Base Voltage	2	V
$I_C$	Collector Current-Continuous	50	mA
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	0.1	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



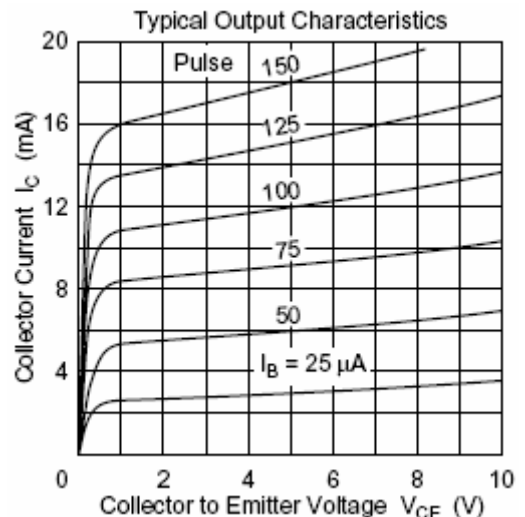
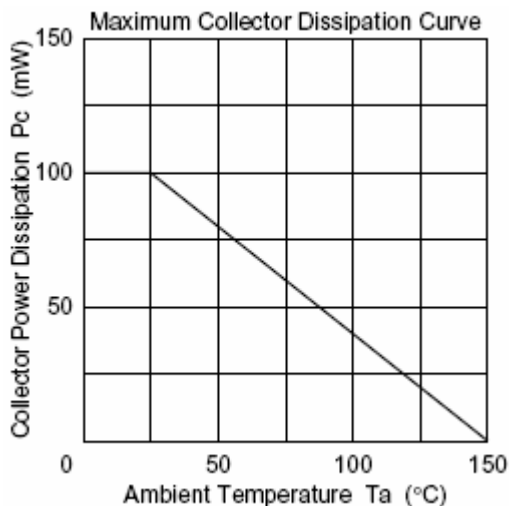
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ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 10 μ A ; I <sub>E</sub> = 0	15			V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 12V; I <sub>E</sub> = 0			1.0	μ A
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 10V; I <sub>E</sub> = ∞			1.0	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 1V; I <sub>C</sub> = 0			1.0	μ A
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 20mA ; V <sub>CE</sub> = 5V	50		250	
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 20mA ; V <sub>CE</sub> = 5V	4.5	6.0		GHz
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0 ; V <sub>CB</sub> = 5V;f= 1.0MHz		1.0	1.5	pF
PG	Power Gain	I <sub>C</sub> = 20mA ; V <sub>CE</sub> = 5V; f= 900MHz		10		dB
NF	Noise Figure	I <sub>C</sub> = 5mA ; V <sub>CE</sub> = 5V;f= 900MHz		1.6		dB



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