

INCHANGE Semiconductor

isc RF Product Specification

isc Silicon NPN RF Transistor

2SC2736

DESCRIPTION

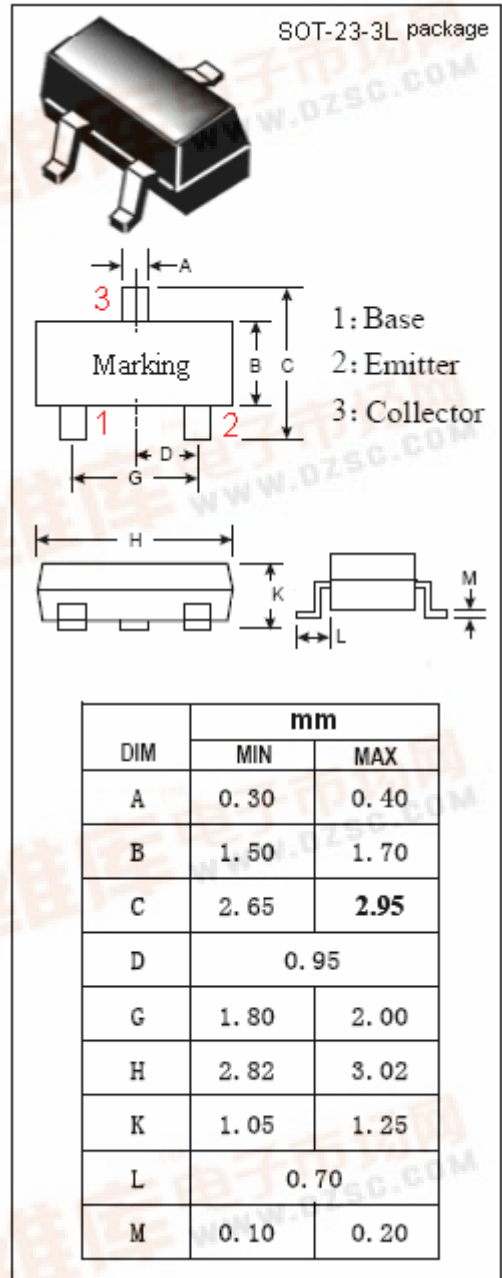
- Low Noise
- High Gain

APPLICATIONS

- Designed for use in UHF~ VHF local oscillator, frequency converter.

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	30	V
V _{CEO}	Collector-Emitter Voltage	20	V
V _{EBO}	Emitter-Base Voltage	3	V
I _C	Collector Current-Continuous	50	mA
P _C	Collector Power Dissipation @T _C =25°C	0.15	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C



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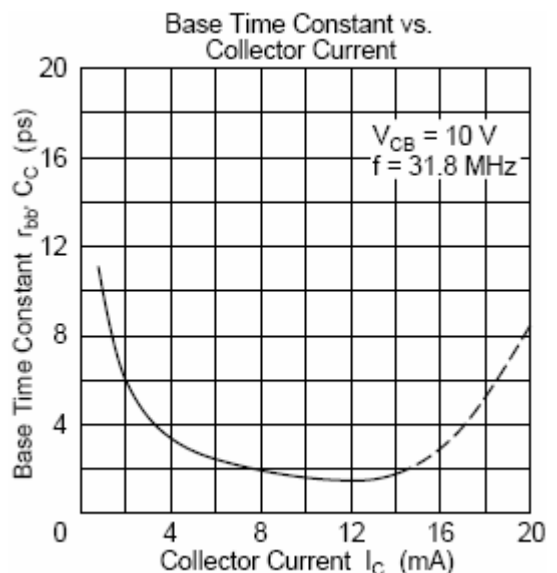
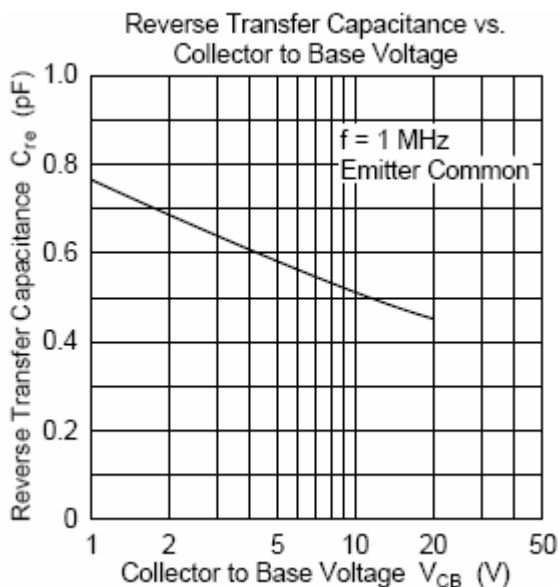
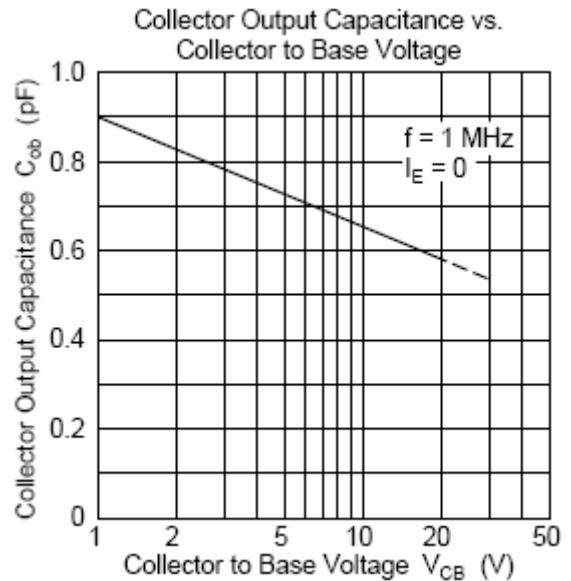
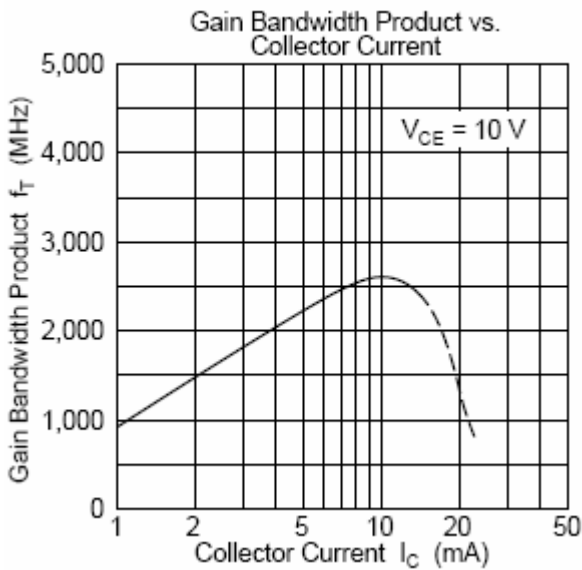
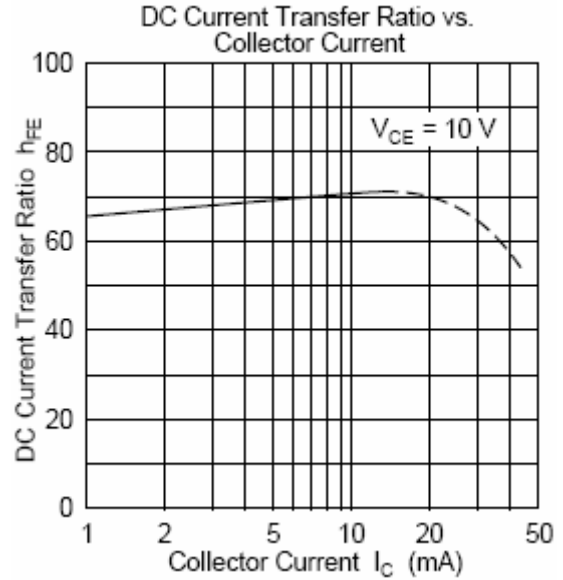
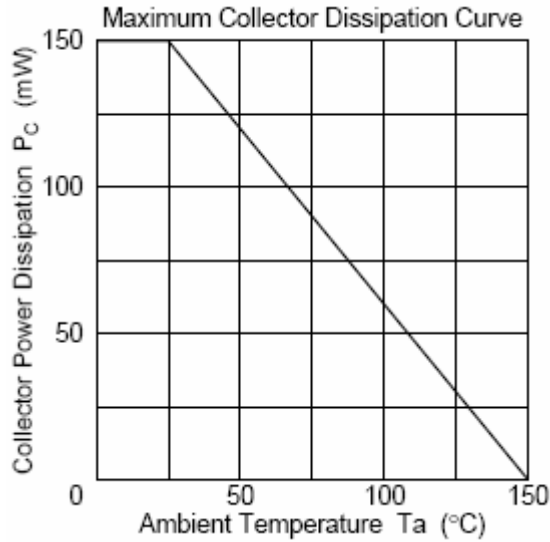
ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=10\mu\text{A}; I_E=0$	30			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}; R_{BE}=\infty$	20			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\mu\text{A}; I_C=0$	3			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10\text{mA}; I_B=5\text{mA}$			0.7	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=15\text{V}; I_E=0$			0.5	μA
h_{FE}	DC Current Gain	$I_C=5\text{mA}; V_{CE}=10\text{V}$	30		200	
f_T	Current-Gain—Bandwidth Product	$I_C=5\text{mA}; V_{CE}=10\text{V}$	1400	2200		MHz
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f=1.0\text{MHz}$			1.0	pF
CG	Conversion Gain	$I_C=2\text{mA}; V_{CC}=12\text{V}; f=200\text{MHz}$ $f_{OSC}=230\text{MHz}(0\text{dBm})$		22.5		dB
CG	Conversion Gain	$I_C=2\text{mA}; V_{CC}=12\text{V}; f=900\text{MHz}$ $f_{OSC}=930\text{MHz}(0\text{dBm})$ $f_{out}=30\text{MHz}$		10		dB
NF	Noise Figure	$I_C=2\text{mA}; V_{CC}=12\text{V}; f=200\text{MHz}$ $f_{OSC}=230\text{MHz}(0\text{dBm})$		4.0		dB
V_{osc}	Oscillating output voltage	$I_C=7\text{mA}; V_{CC}=12\text{V}; f_{osc}=300\text{MHz}$		300		mV
V_{osc}	Oscillating output voltage	$I_C=7\text{mA}; V_{CC}=12\text{V}; f_{osc}=930\text{MHz}$		200		mV

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