

isc Silicon NPN RF Transistor

2SC3127

DESCRIPTION

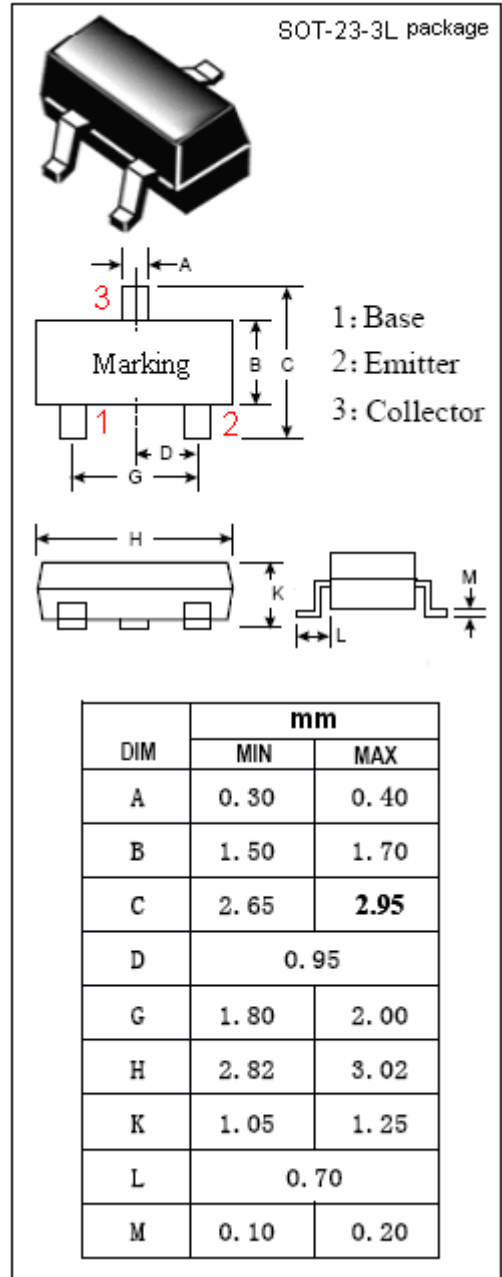
- Low Noise and High Gain
 NF = 2.2 dB TYP. @ $V_{CE} = 5\text{ V}$, $I_C = 5\text{ mA}$, $f = 900\text{ MHz}$
 PG = 10.5 dB TYP. @ $V_{CE} = 5\text{ V}$, $I_C = 20\text{ mA}$, $f = 900\text{ MHz}$

APPLICATIONS

- Designed for use in low-noise and small signal amplifiers from VHF ~ UHF band.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	20	V
V_{CEO}	Collector-Emitter Voltage	12	V
V_{EBO}	Emitter-Base Voltage	3	V
I_C	Collector Current-Continuous	50	mA
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	0.15	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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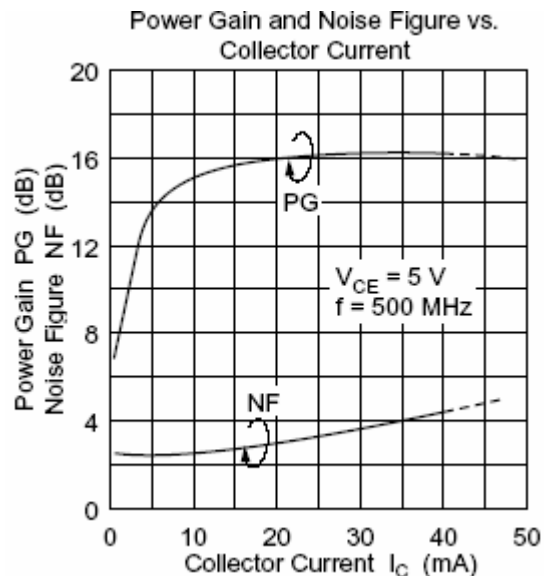
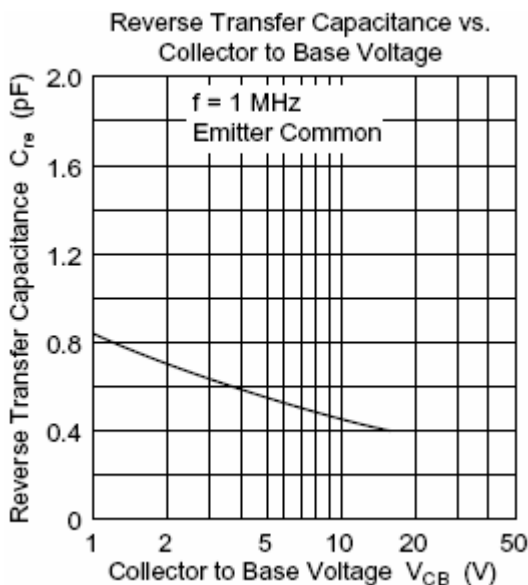
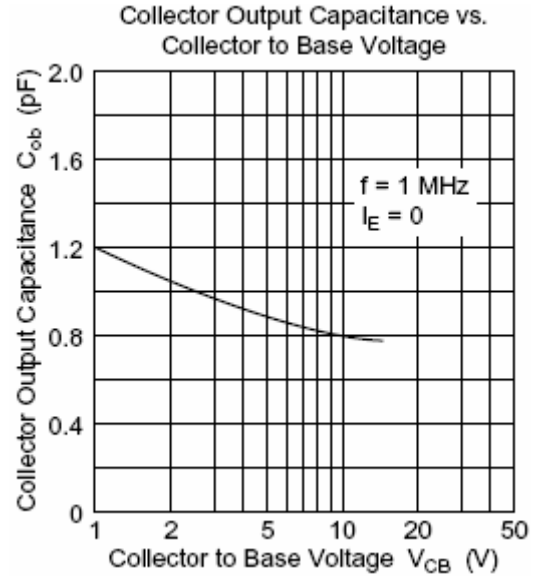
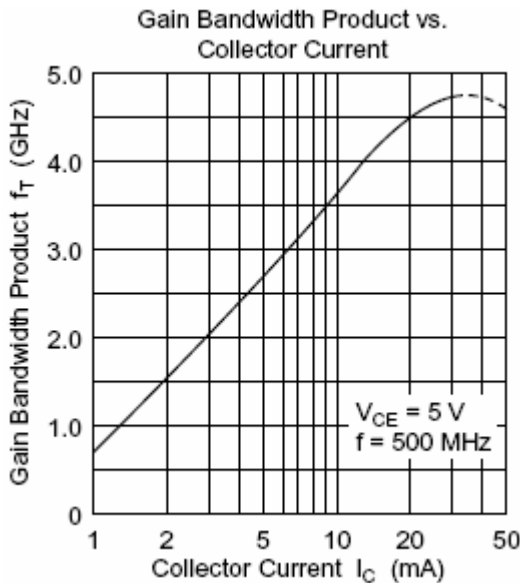
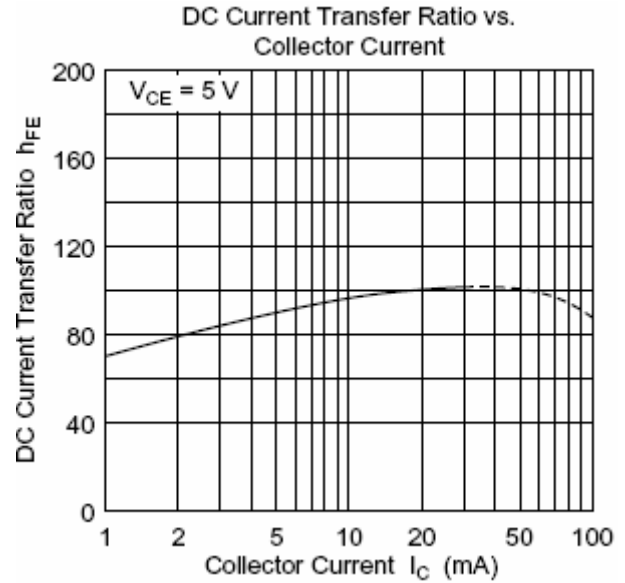
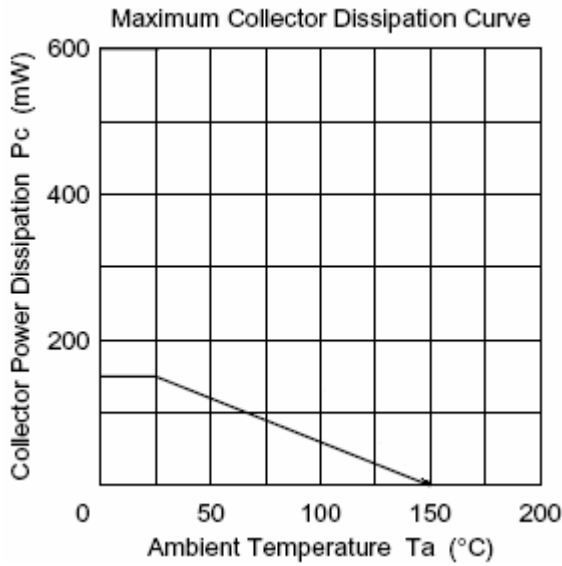
ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=10\mu\text{A}$; $I_E=0$	20			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}$; $R_{BE}=\infty$	12			V
I_{CBO}	Collector Cutoff Current	$V_{CB}=12\text{V}$; $I_E=0$			0.5	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=3\text{V}$; $I_C=0$			10	μA
h_{FE}	DC Current Gain	$I_C=20\text{mA}$; $V_{CE}=5\text{V}$	30		200	
f_T	Current-Gain—Bandwidth Product	$I_C=20\text{mA}$; $V_{CE}=5\text{V}$	3.5	4.5		GHz
C_{OB}	Output Capacitance	$I_E=0$; $V_{CB}=5\text{V}$; $f=1.0\text{MHz}$		0.9	1.5	pF
PG	Power Gain	$I_C=20\text{mA}$; $V_{CE}=5\text{V}$; $f=900\text{MHz}$		10.5		dB
NF	Noise Figure	$I_C=5\text{mA}$; $V_{CE}=5\text{V}$; $f=900\text{MHz}$		2.2		dB

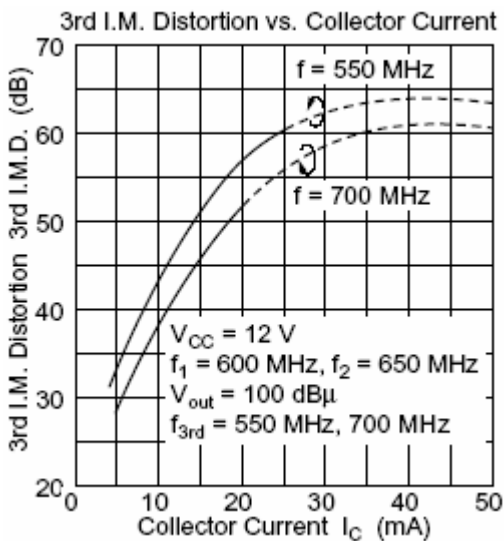
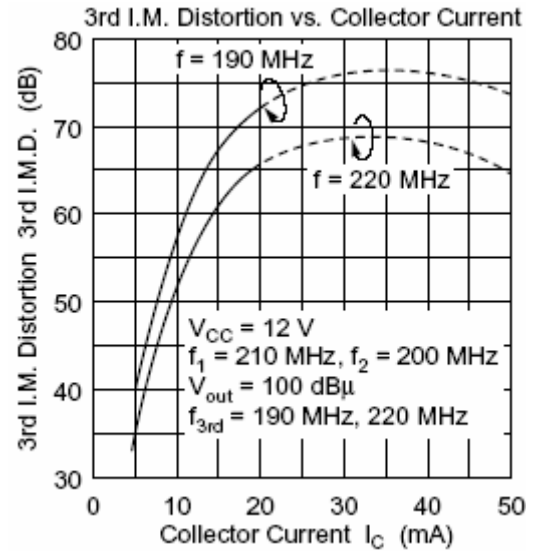
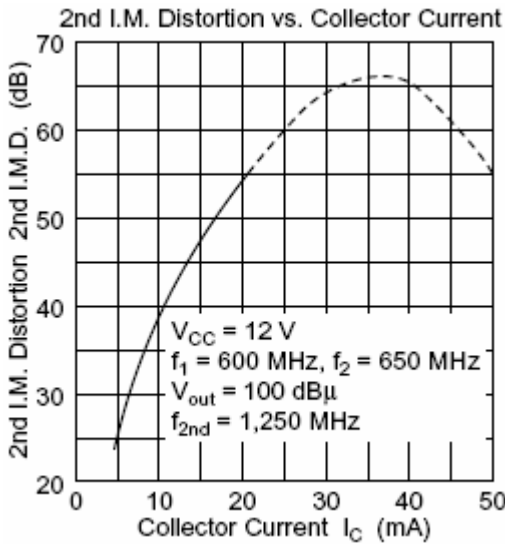
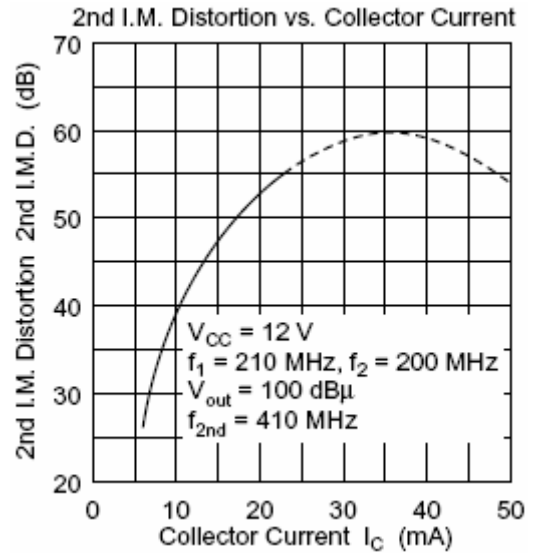
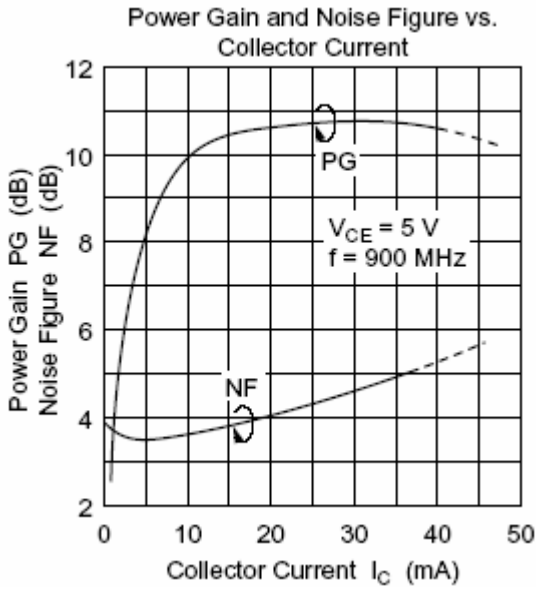
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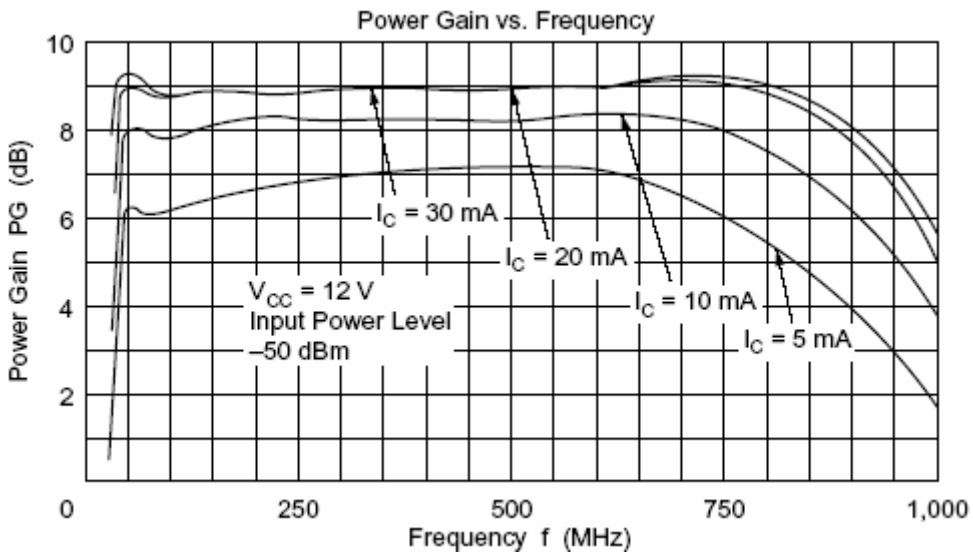
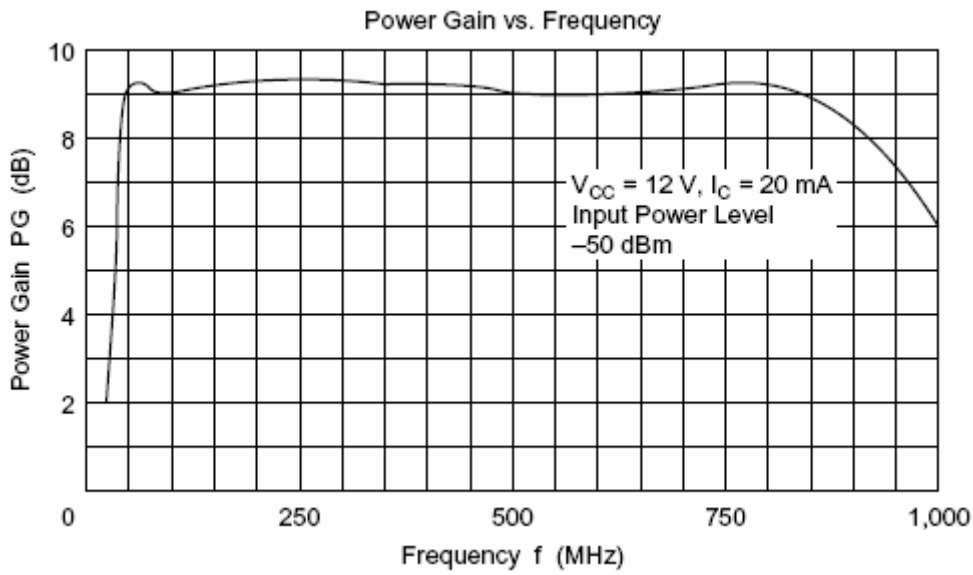
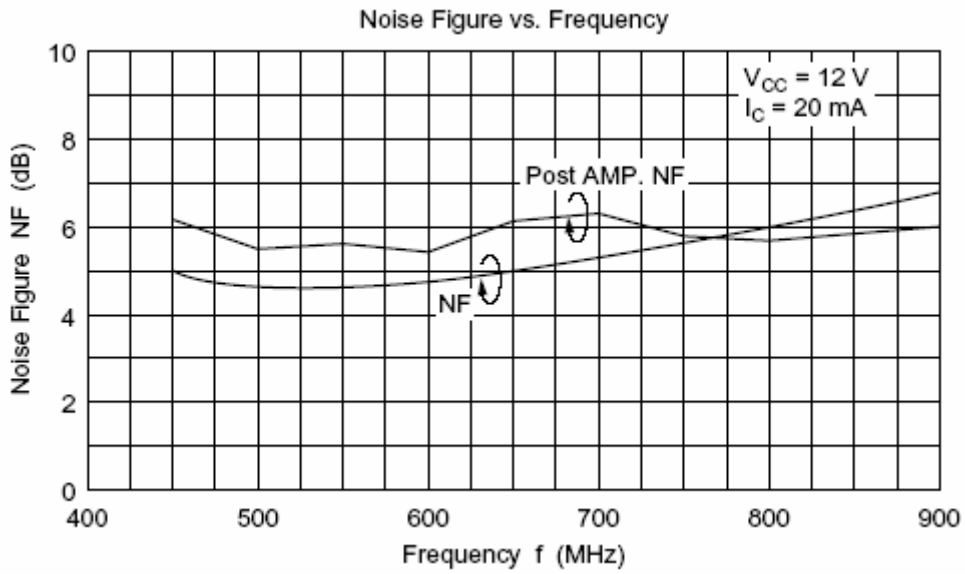
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