

ISC Silicon NPN RF Transistor

2SC2351

DESCRIPTION

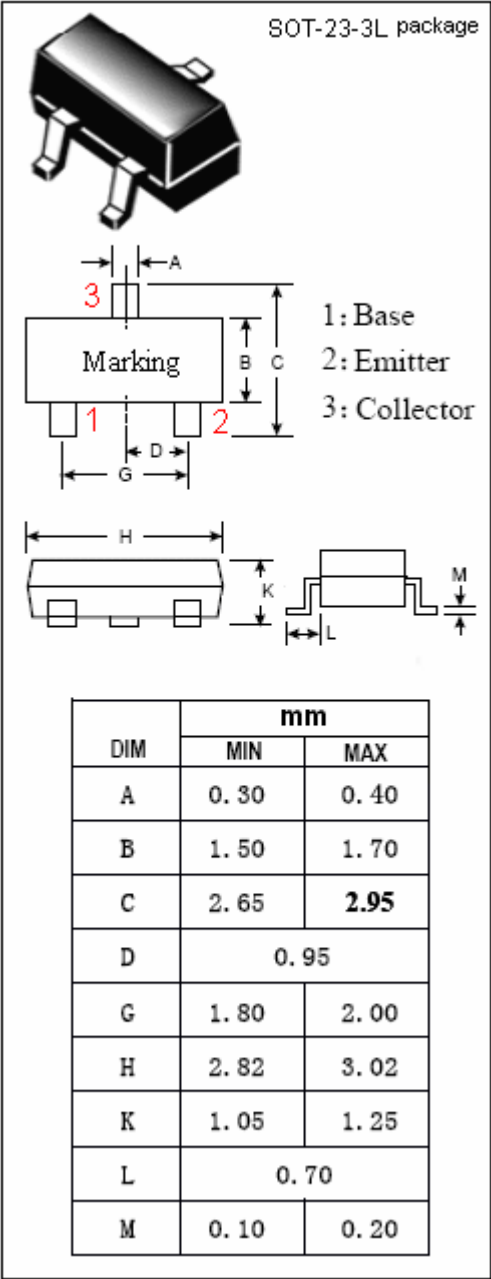
- Low Noise
NF = 1.5 dB TYP. ; @ f = 1 GHz
- High Maximum Available Gain
MAG = 14 dB TYP. ; @ f = 1 GHz

APPLICATIONS

- Designed for use as UHF oscillators and a UHF mixer in a tuner of a TV receiver.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	25	V
V_{CEO}	Collector-Emitter Voltage	12	V
V_{EBO}	Emitter-Base Voltage	3	V
I_C	Collector Current-Continuous	70	mA
P_C	Collector Power Dissipation @ $T_c=25^{\circ}\text{C}$	0.25	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^{\circ}\text{C}$



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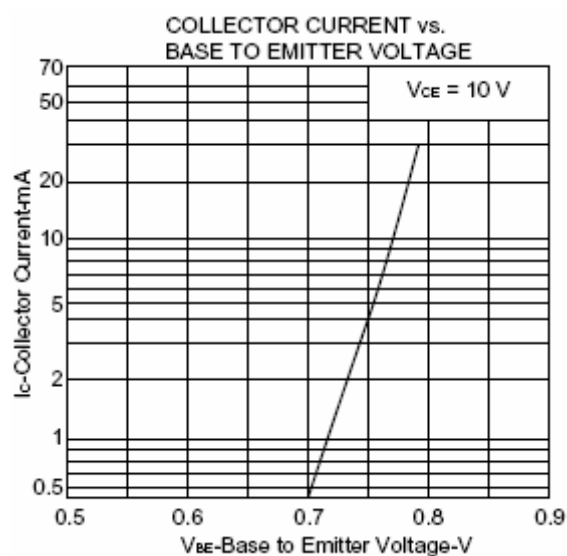
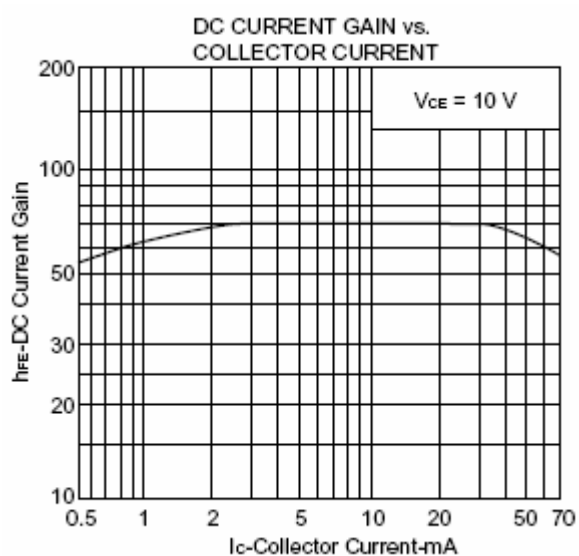
ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I_{CBO}	Collector Cutoff Current	$V_{CB}=15\text{V}; I_E=0$			0.1	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=2.0\text{V}; I_C=0$			0.1	μA
h_{FE}	DC Current Gain	$I_C=20\text{mA}; V_{CE}=10\text{V}$	40		200	
f_T	Current-Gain—Bandwidth Product	$I_C=20\text{mA}; V_{CE}=10\text{V}$		4.5		GHz
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f=1\text{MHz}$		0.75	1.0	pF
$ S_{21e} ^2$	Insertion Power Gain	$I_C=20\text{mA}; V_{CE}=10\text{V}; f=1.0\text{GHz}$	9	11		dB
NF	Noise Figure	$I_C=5\text{mA}; V_{CE}=10\text{V}; f=1.0\text{GHz}$		1.5	3.0	dB
MAG	Maximum Available Gain	$I_C=20\text{mA}; V_{CE}=10\text{V}; f=1.0\text{GHz}$		14		dB

◆ h_{FE} Classification

Class	E/P	F/Q
Marking	R2	R3
h_{FE}	40-120	100-200



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