

isc Silicon NPN RF Transistor

2SC3547

DESCRIPTION

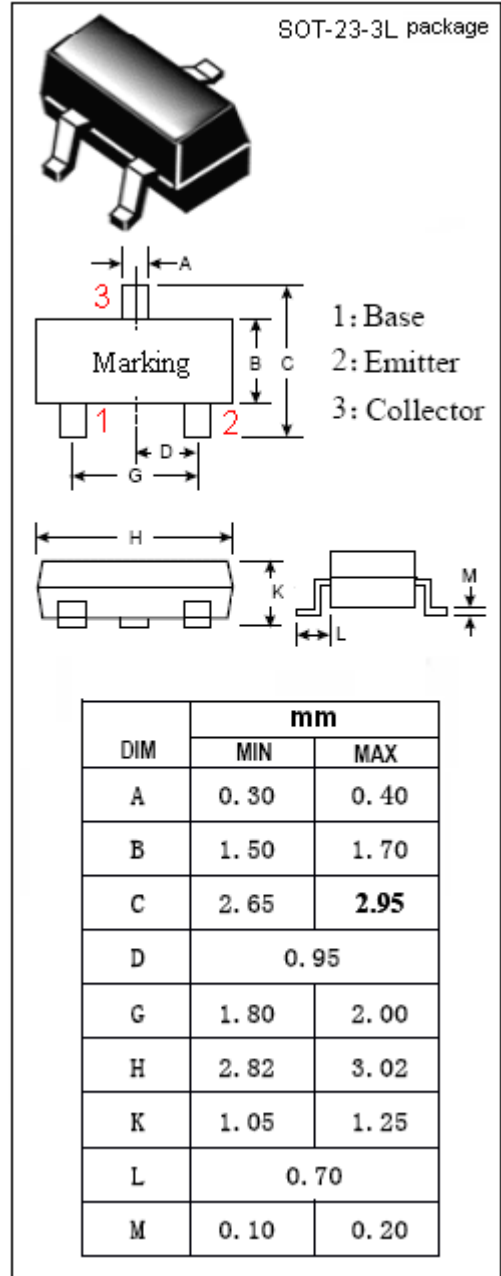
- High Current-Gain—Bandwidth Product
 $f_T = 4 \text{ GHz TYP. @ } V_{CE} = 10 \text{ V}, I_C = 5 \text{ mA}$

APPLICATIONS

- Designed for TV tuner, UHF oscillator applications.

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	30	mA
I_B	Base Current-Continuous	15	mA
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	0.15	W
T_J	Junction Temperature	125	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~125	$^\circ\text{C}$



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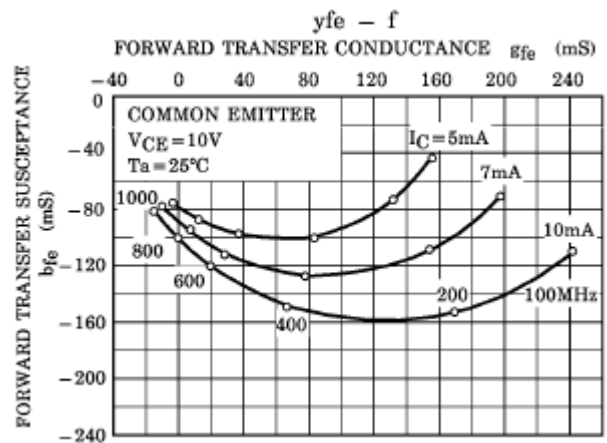
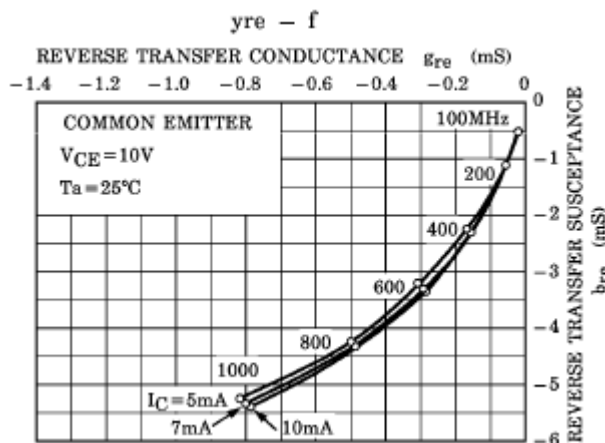
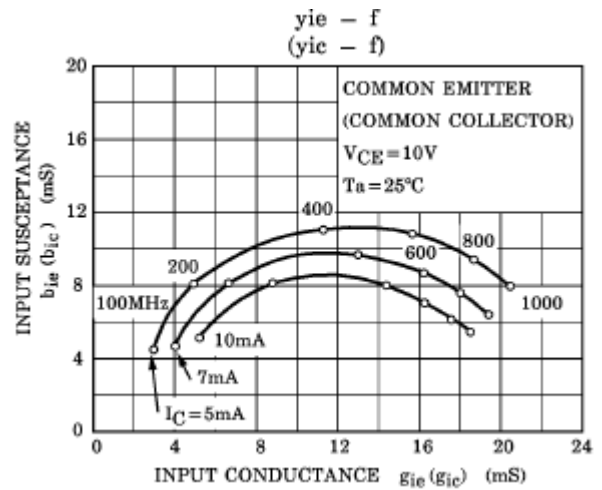
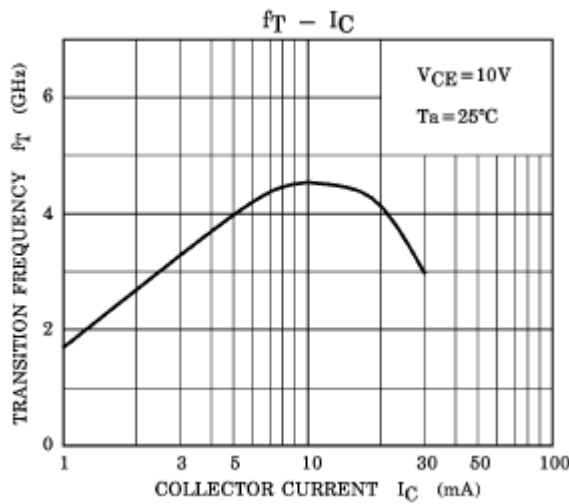
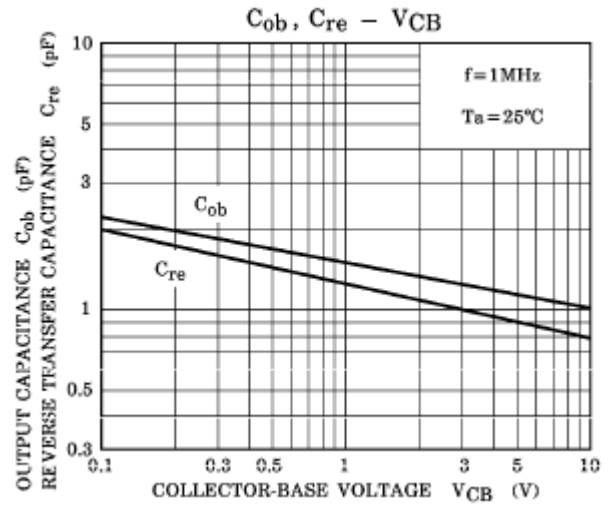
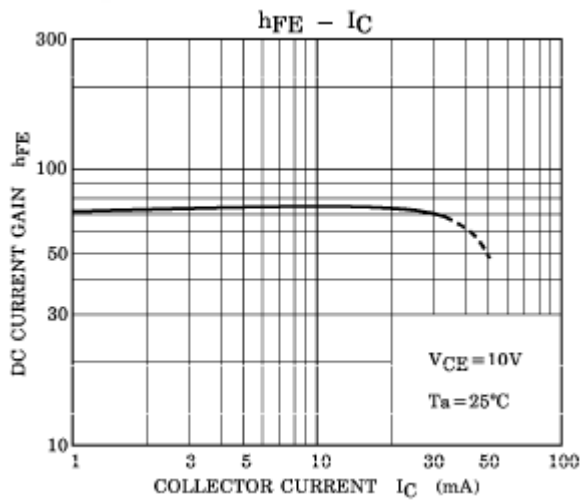
ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}; I_B=0$	12			V
I_{CBO}	Collector Cutoff Current	$V_{CB}=10\text{V}; I_E=0$			0.1	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=1\text{V}; I_C=0$			1.0	μA
h_{FE}	DC Current Gain	$I_C=5\text{mA}; V_{CE}=10\text{V}$	35		130	
f_T	Current-Gain—Bandwidth Product	$I_C=10\text{mA}; V_{CE}=10\text{V}$	3	4		GHz
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f=1.0\text{MHz}$		1.05	1.35	pF
$r_{bb'} \cdot C_C$	Base Time Constant	$I_C=5\text{mA}; V_{CB}=10\text{V}; f=30\text{MHz}$		4.5	10	ps

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