

isc Silicon NPN RF Transistor

2SC4250

DESCRIPTION

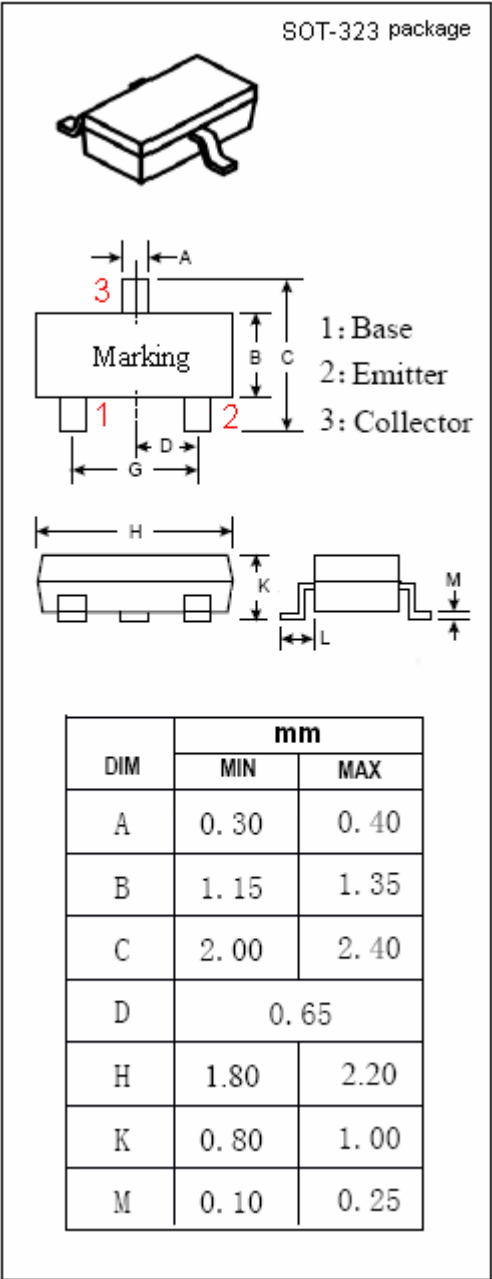
- High Conversion Gain-
 $G_{ce} = 25 \text{ dB TYP.}$
- Low Reverse Transfer Capacitance-
 $C_{re} = 0.45 \text{ pF TYP.}$

APPLICATIONS

- Designed for TV VHF mixer applications.

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

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
I_B	Base Current-Continuous	25	mA
P_C	Collector Power Dissipation @ $T_c=25^{\circ}\text{C}$	0.1	W
T_J	Junction Temperature	125	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~125	$^{\circ}\text{C}$



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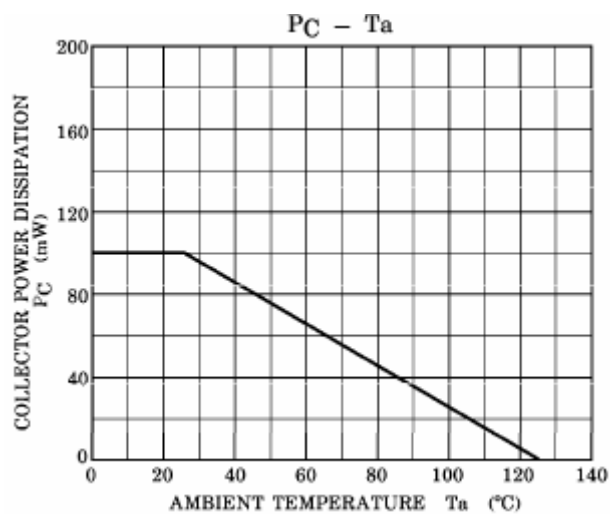
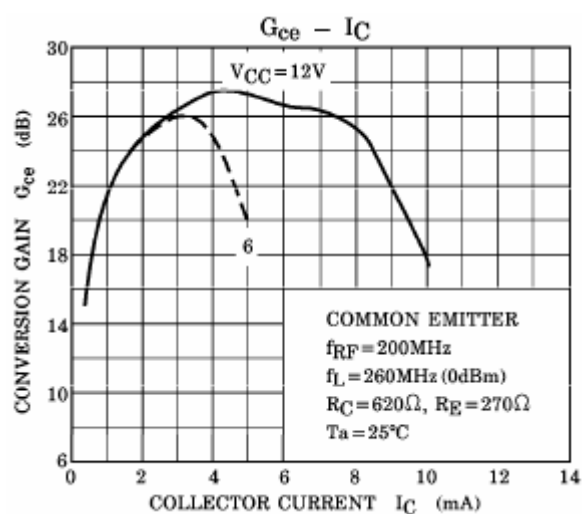
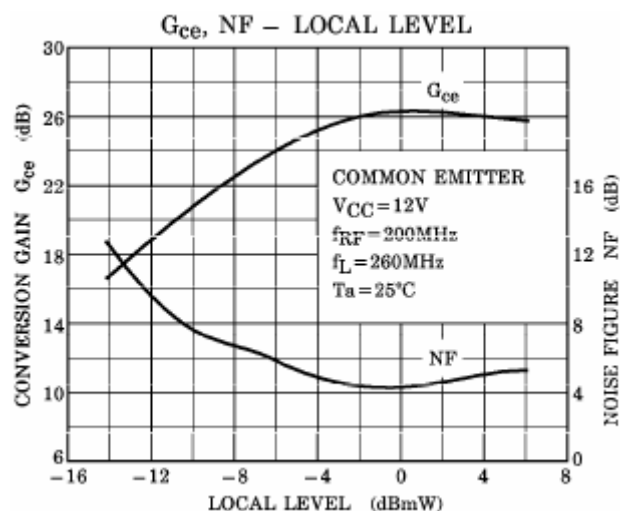
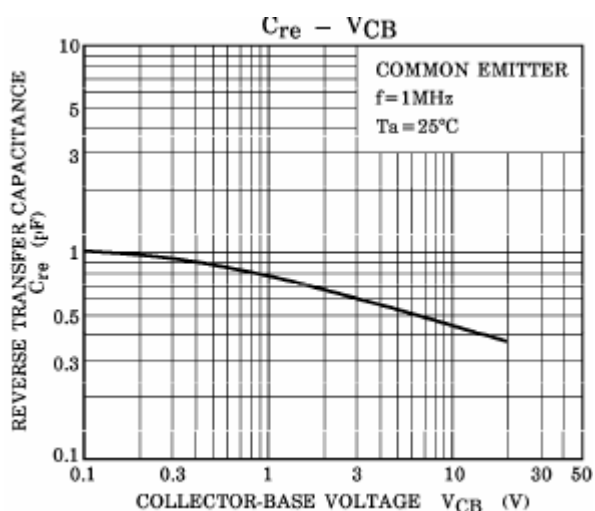
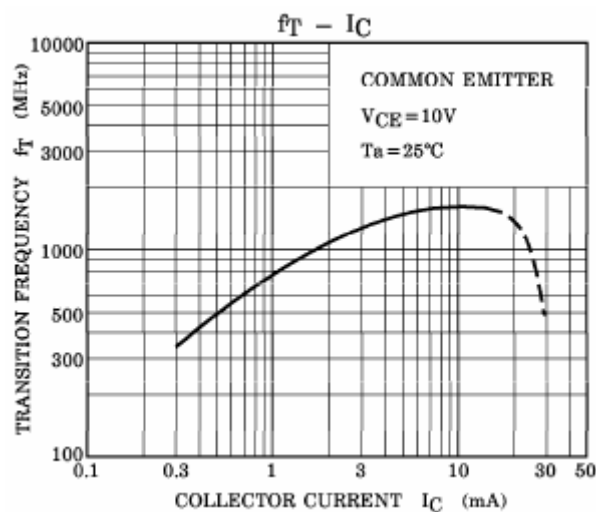
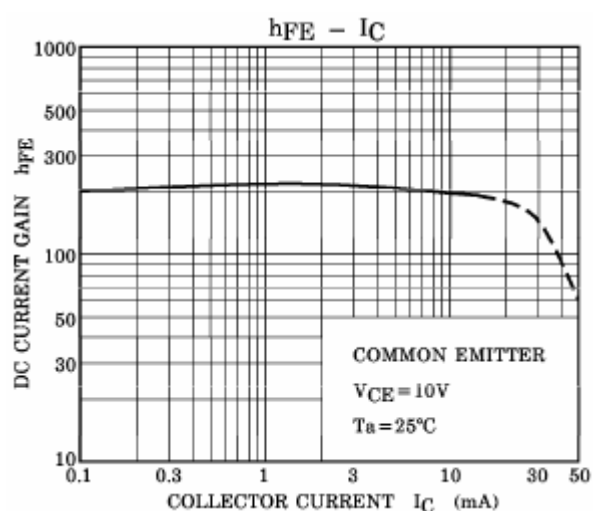
ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I_{CBO}	Collector Cutoff Current	$V_{CB}=25\text{V}; I_E=0$			0.1	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=3\text{V}; I_C=0$			1.0	μA
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}; I_B=0$	20			V
h_{FE}	DC Current Gain	$I_C=5\text{mA}; V_{CE}=10\text{V}$	40		300	
f_T	Current-Gain—Bandwidth Product	$I_C=5\text{mA}; V_{CE}=10\text{V}$	900	1400		MHz
C_{re}	Reverse Transfer Capacitance	$I_E=0; V_{CB}=10\text{V}; f=1\text{MHz}$		0.45	0.6	pF
G_{ce}	Conversion Gain	$V_{CC}=12\text{V}; f=200\text{MHz}$ $f_L=260\text{MHz}$	20	25		dB
NF	Noise Figure			4.3	6	dB

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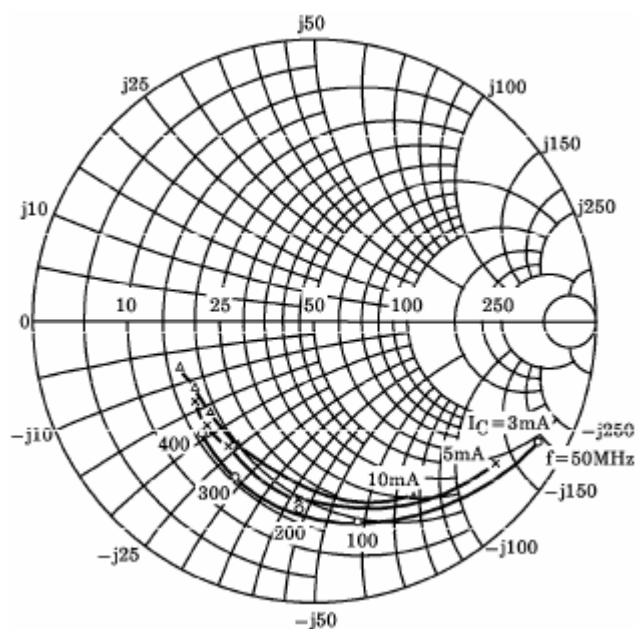
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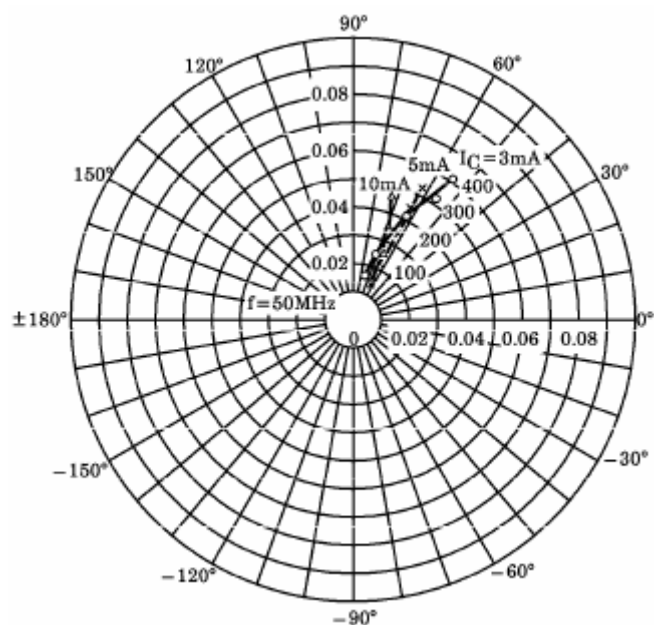
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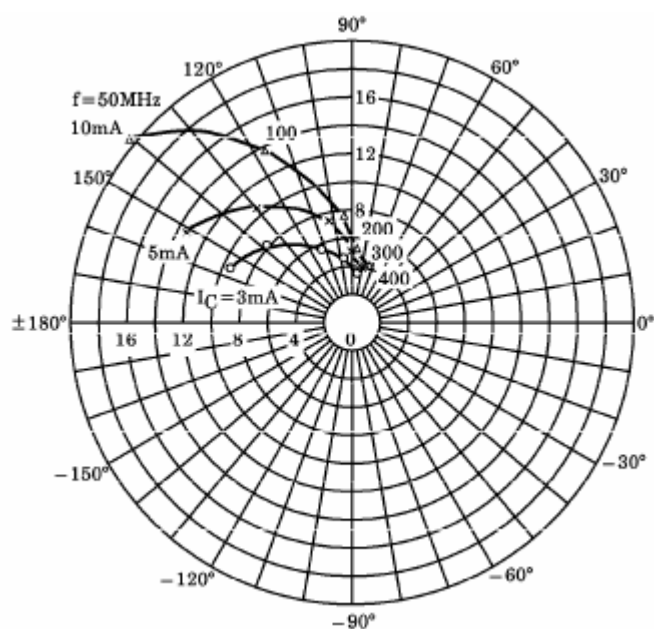
S_{11e}
 $V_{CE} = 10V$
 $T_a = 25^\circ C$
 (UNIT : Ω)



S_{12e}
 $V_{CE} = 10V$
 $T_a = 25^\circ C$



S_{21e}
 $V_{CE} = 10V$
 $T_a = 25^\circ C$



S_{22e}
 $V_{CE} = 10V$
 $T_a = 25^\circ C$
 (UNIT : Ω)

