isc Silicon NPN RF Transistor 2SC4250

DESCRIPTION

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

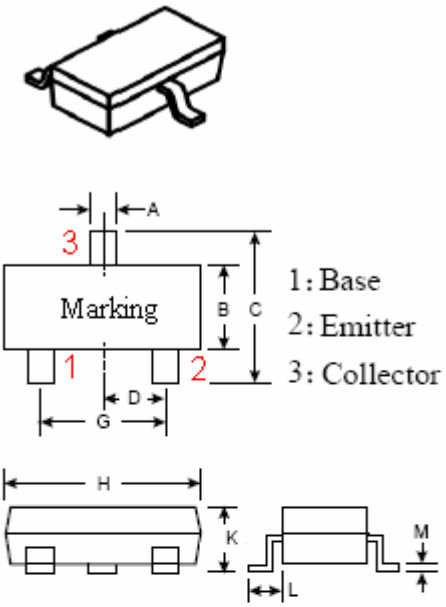
APPLICATIONS

- Designed for TV VHF mixer applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	0.1	W
T_J	Junction Temperature	125	℃
T_{stg}	Storage Temperature Range	-55~125	℃

SOT-323 package



DIM	mm	
	MIN	MAX
A	0.30	0.40
B	1.15	1.35
C	2.00	2.40
D	0.65	
H	1.80	2.20
K	0.80	1.00
M	0.10	0.25

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

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

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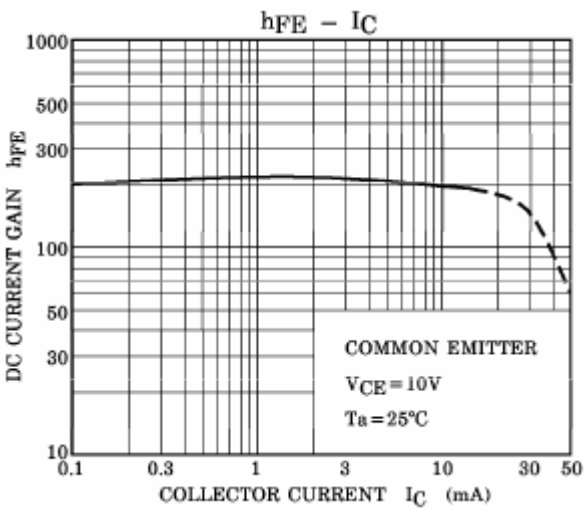

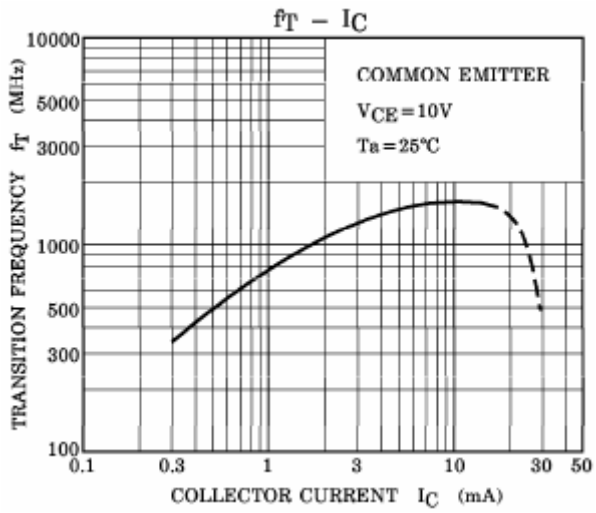

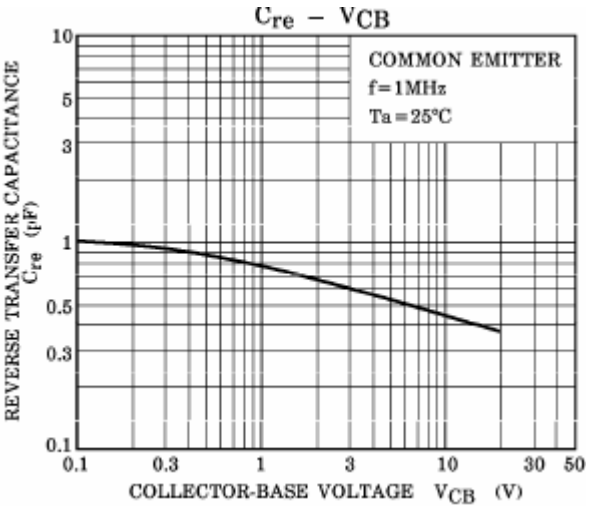

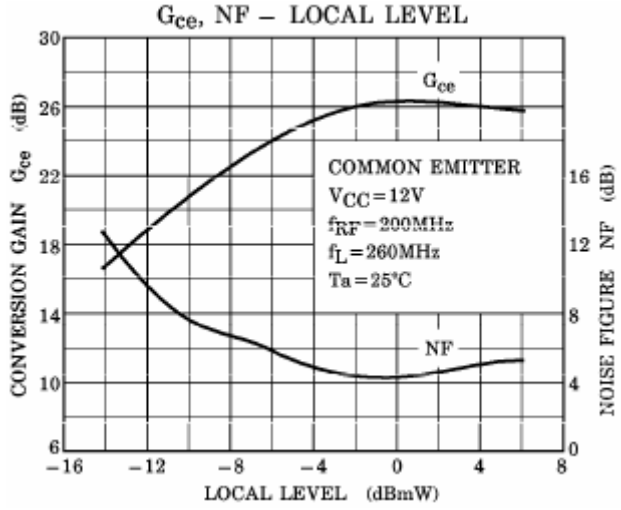

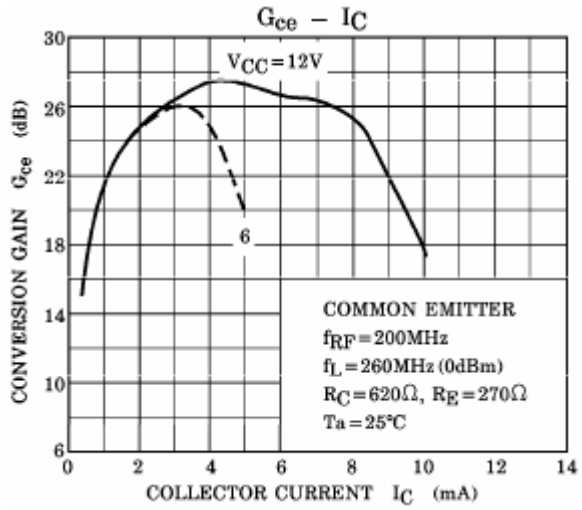

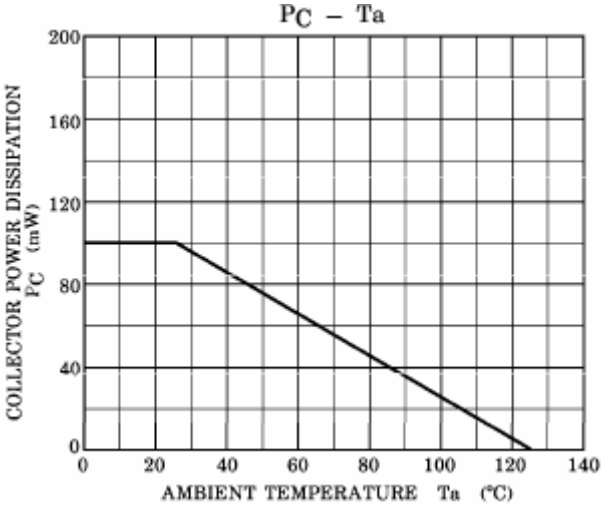

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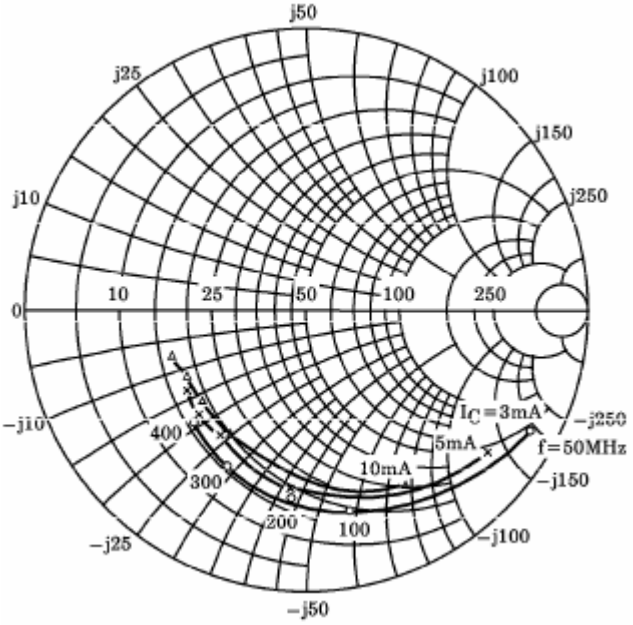
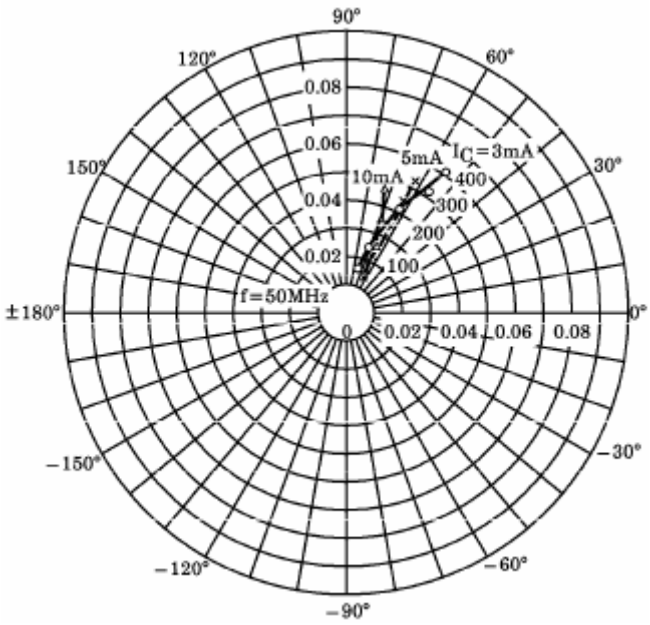
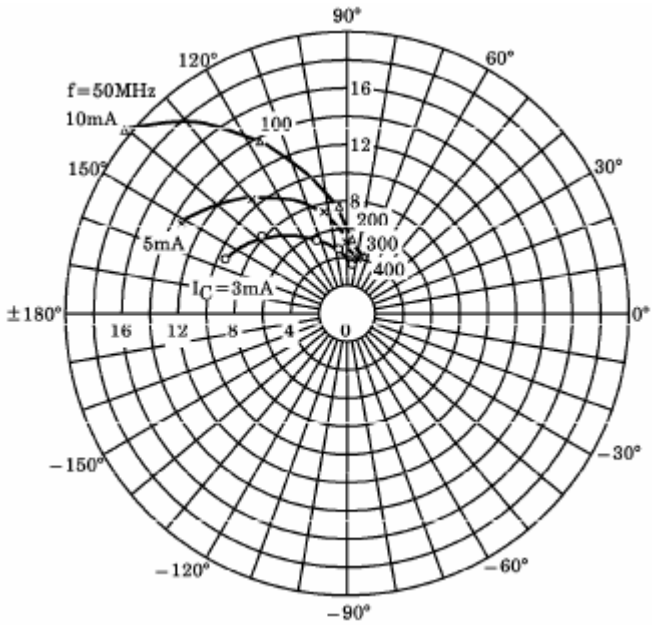
S_{11e}
$V_{CE}=10V$
Ta=25℃
(UNIT : Ω)



S_{12e}
$V_{CE}=10V$
Ta=25℃



S_{21e}
$V_{CE}=10V$
Ta=25℃



S_{22e}
$V_{CE}=10V$
Ta=25℃
(UNIT : Ω)