

isc Silicon NPN RF Transistor

2SC4250

DESCRIPTION

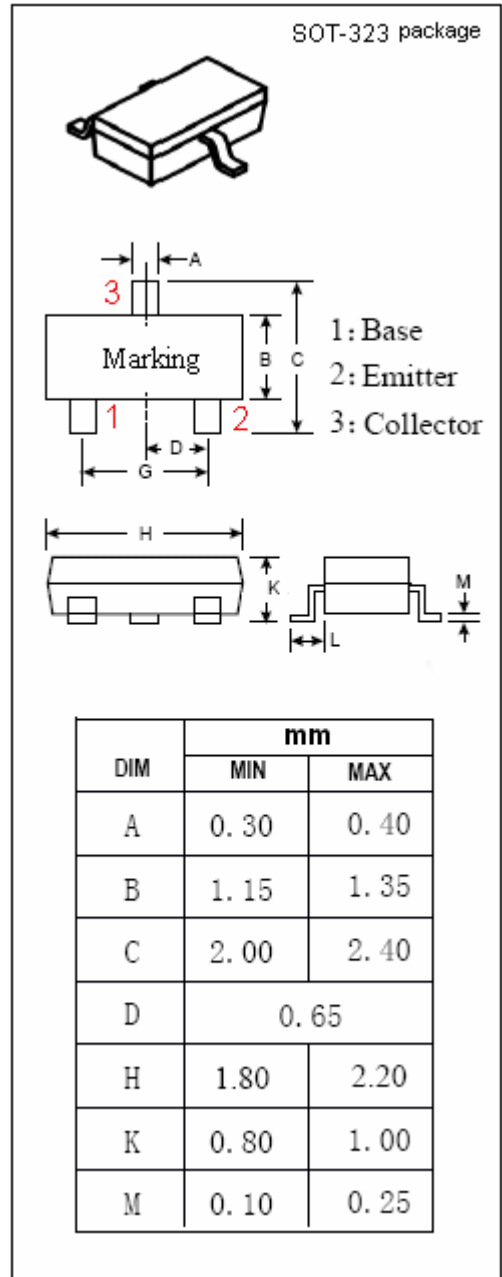
- High Conversion Gain-  
 $G_{ce} = 25 \text{ dB TYP.}$
- Low Reverse Transfer Capacitance-  
 $C_{re} = 0.45 \text{ pF TYP.}$

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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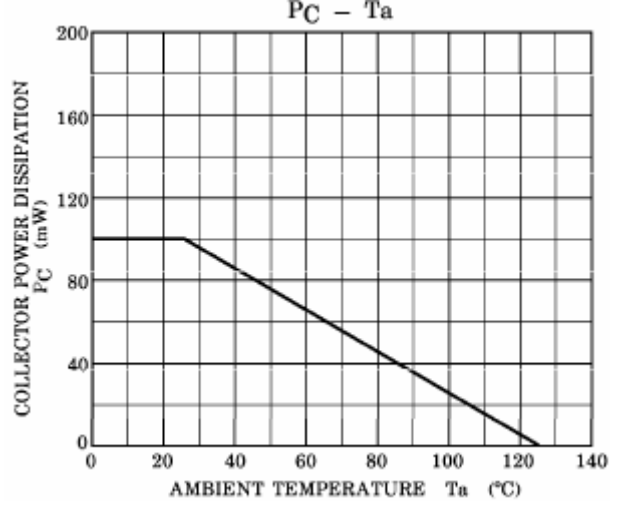
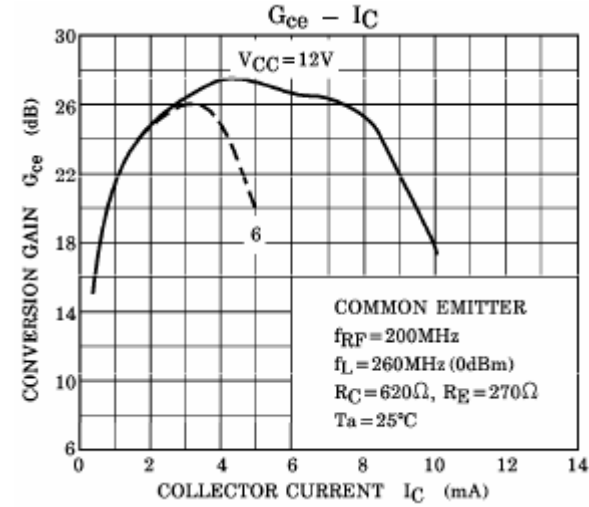
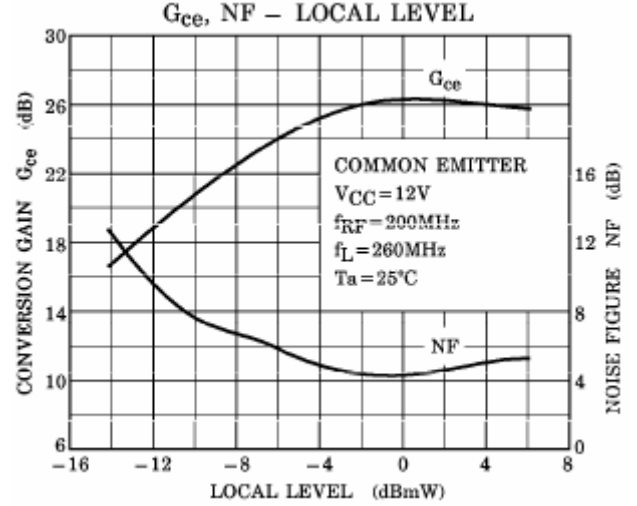
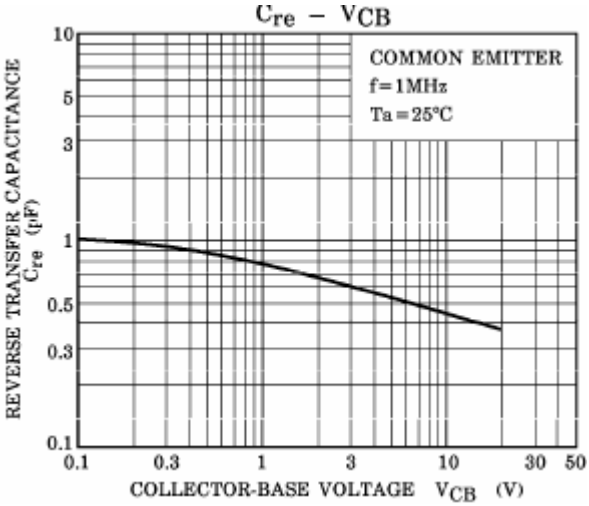
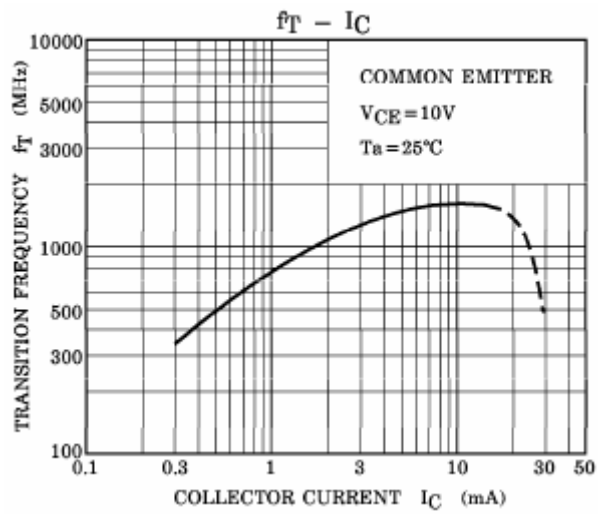
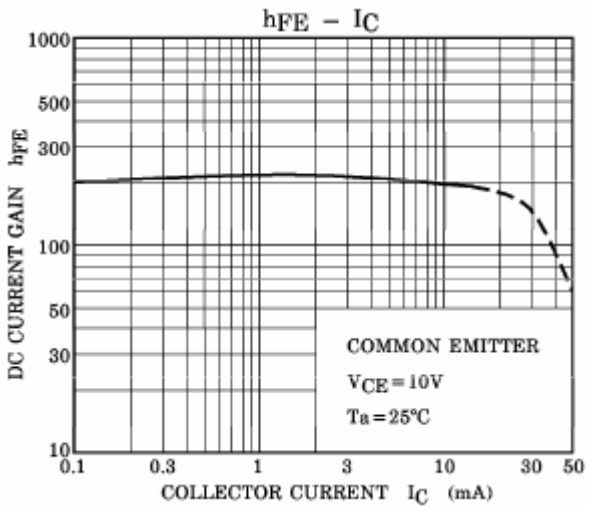
## ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 25V; I <sub>E</sub> = 0			0.1	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 3V; I <sub>C</sub> = 0			1.0	μ A
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 1mA ; I <sub>B</sub> = 0	20			V
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 5mA ; V <sub>CE</sub> = 10V	40		300	
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 5mA;V <sub>CE</sub> = 10V	900	1400		MHz
C <sub>re</sub>	Reverse Transfer Capacitance	I <sub>E</sub> = 0 ; V <sub>CB</sub> = 10V; f= 1MHz		0.45	0.6	pF
G <sub>ce</sub>	Conversion Gain	V <sub>CC</sub> = 12V; f= 200MHz f <sub>L</sub> = 260MHz	20	25		dB
NF	Noise Figure			4.3	6	dB

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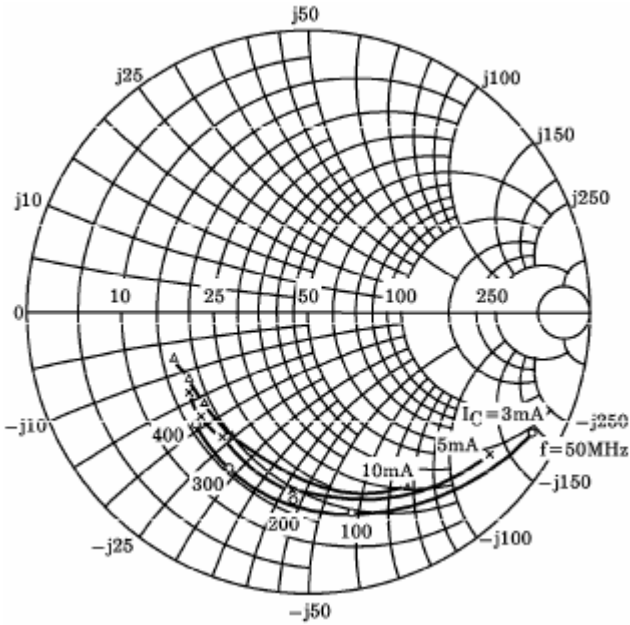
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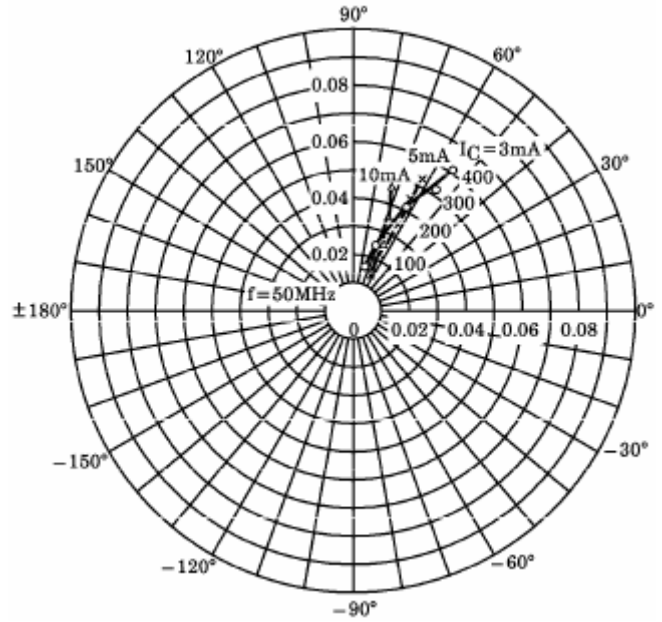
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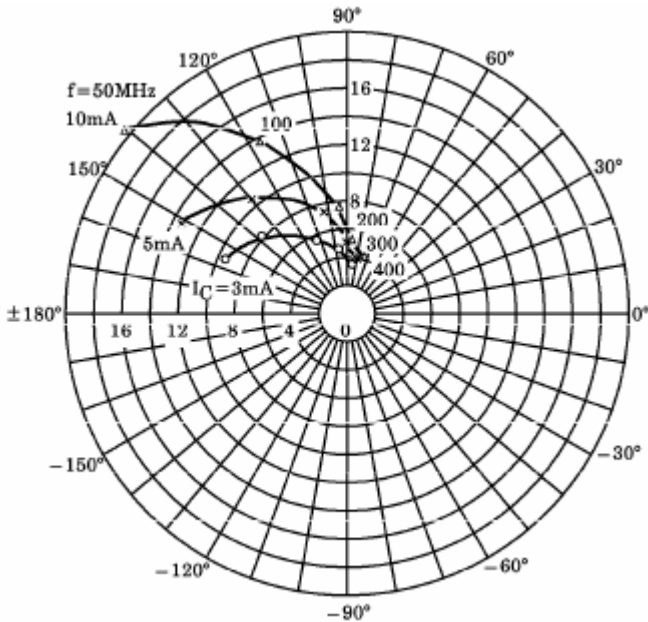
S<sub>11e</sub>  
 V<sub>CE</sub> = 10V  
 T<sub>a</sub> = 25°C  
 (UNIT : Ω)



S<sub>12e</sub>  
 V<sub>CE</sub> = 10V  
 T<sub>a</sub> = 25°C



S<sub>21e</sub>  
 V<sub>CE</sub> = 10V  
 T<sub>a</sub> = 25°C



S<sub>22e</sub>  
 V<sub>CE</sub> = 10V  
 T<sub>a</sub> = 25°C  
 (UNIT : Ω)

