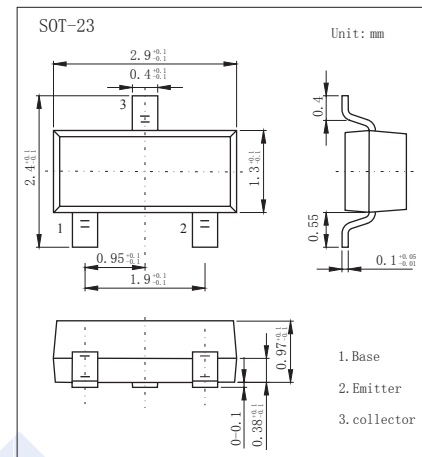


## NPN Transistors

## 2SC3606

## ■ Features

- Collector Current Capability  $I_c=80\text{mA}$
- Collector Emitter Voltage  $V_{CE0}=12\text{V}$

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	20	V
Collector - Emitter Voltage	$V_{CE0}$	12	
Emitter - Base Voltage	$V_{EB0}$	3	
Collector Current - Continuous	$I_c$	80	mA
Base Current	$I_B$	40	
Collector Power Dissipation	$P_C$	150	mW
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 125	

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_c = 100 \mu\text{A}, I_E = 0$	20			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_c = 1 \text{ mA}, I_B = 0$	12			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = 100 \mu\text{A}, I_c = 0$	3			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = 10\text{V}, I_E = 0$			1	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = 3\text{V}, I_c = 0$			1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 80 \text{ mA}, I_B = 8 \text{ mA}$			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 80 \text{ mA}, I_B = 8 \text{ mA}$			1.2	
DC current gain	$h_{FE}$	$V_{CE} = 10\text{V}, I_c = 20\text{mA}$	30		250	
Insertion Power Gain	$ S_{21e} ^2$	$V_{CE} = 10\text{V}, I_c = 20 \text{ mA}, f = 0.5\text{GHz}$		16.5		dB
		$V_{CE} = 10\text{V}, I_c = 20 \text{ mA}, f = 1\text{GHz}$	7.5			
Noise Figure	NF	$V_{CE} = 10\text{V}, I_c = 5 \text{ mA}, f = 0.5\text{GHz}$		1		
		$V_{CE} = 10\text{V}, I_c = 5 \text{ mA}, f = 1\text{GHz}$			2	
Reverse transfer capacitance	$C_{re}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$			1.15	pF
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		1		pF
Transition frequency	$f_T$	$V_{CE} = 10\text{V}, I_c = 20\text{mA}$	5			GHz

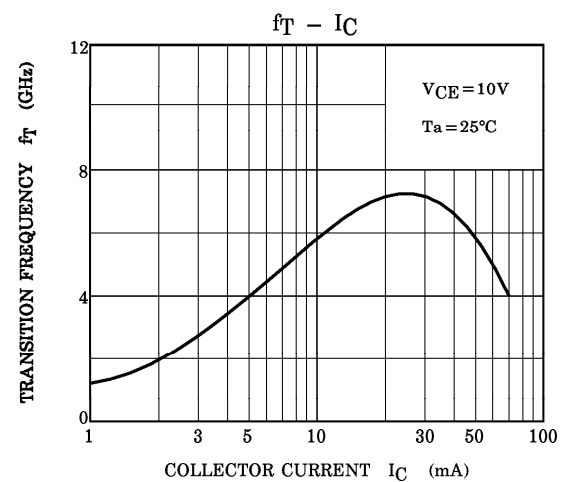
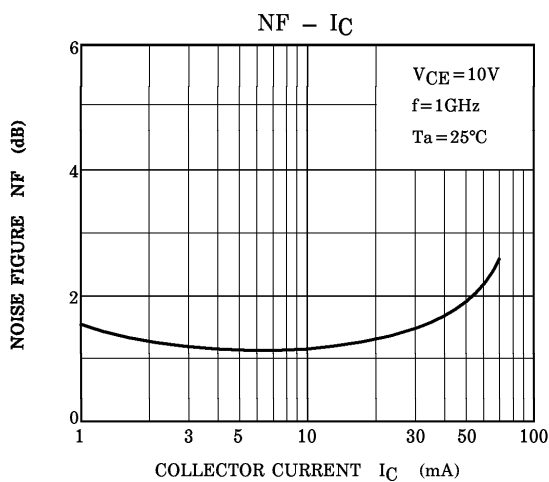
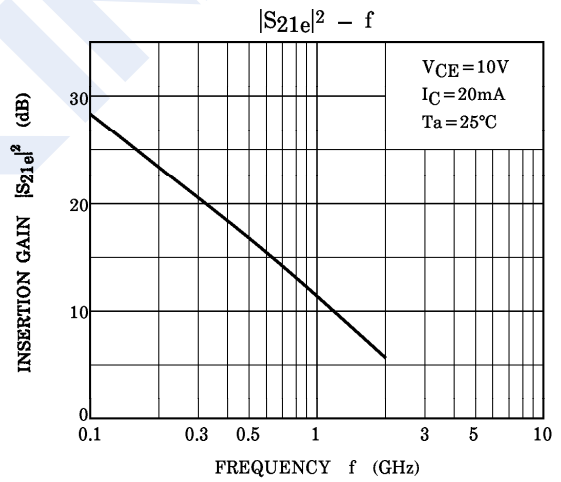
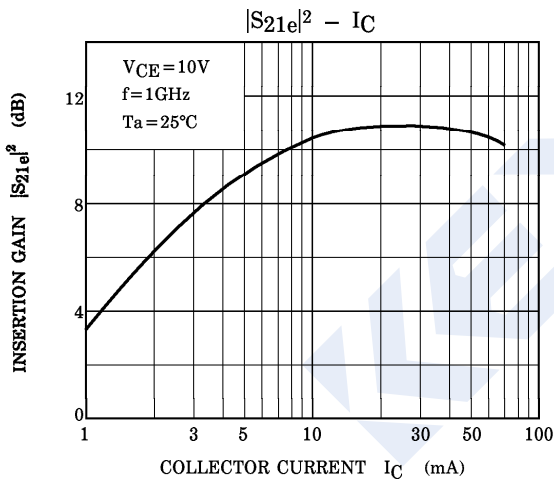
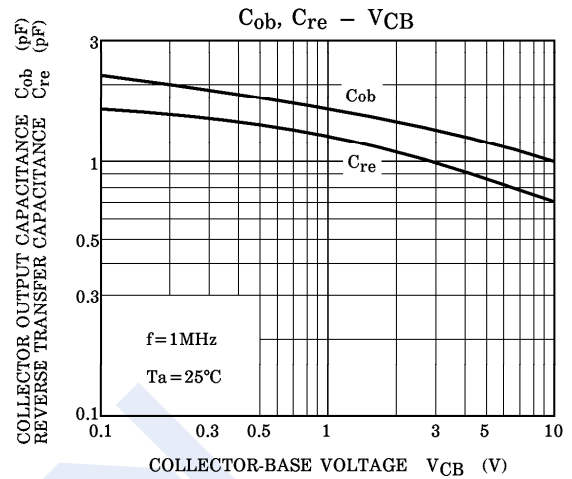
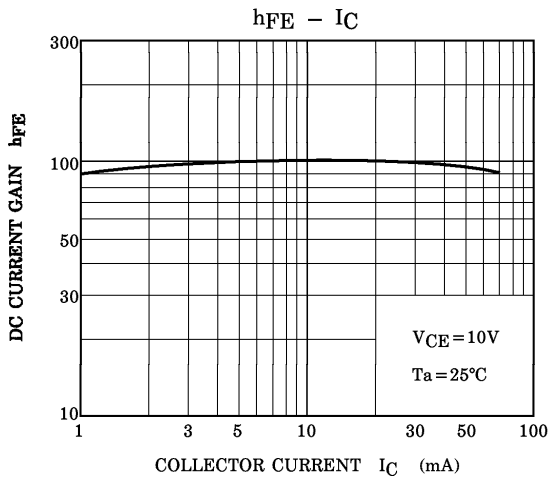
## ■ Marking

Marking	MH
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## NPN Transistors

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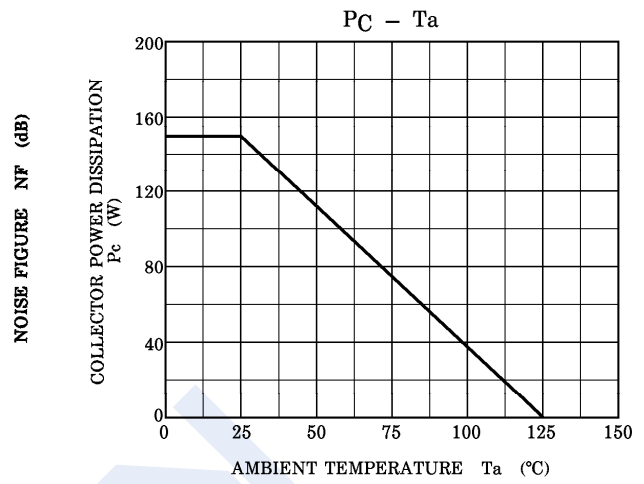
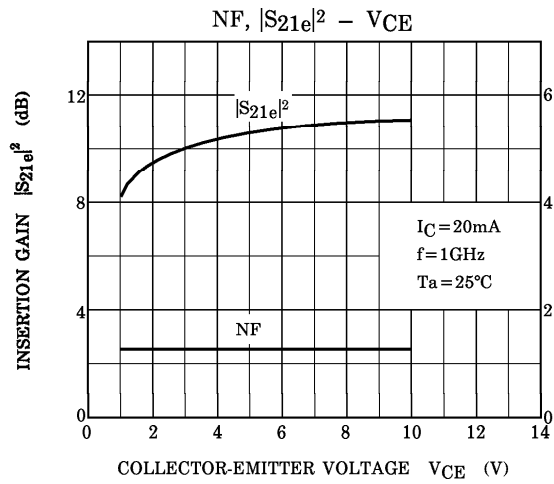
■ Typical Characteristics



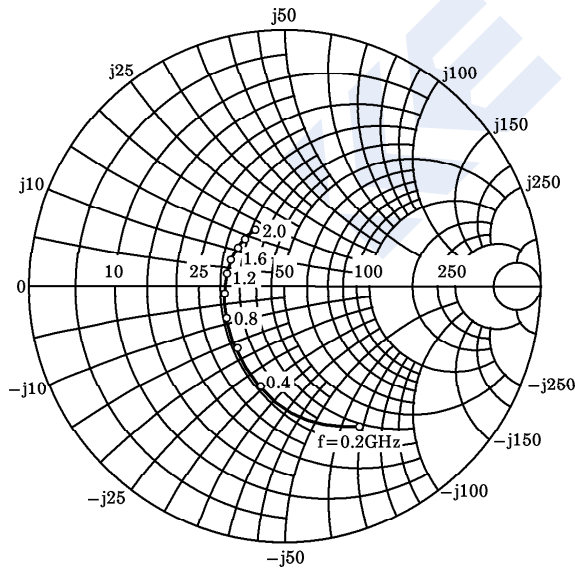
### NPN Transistors

### 2SC3606

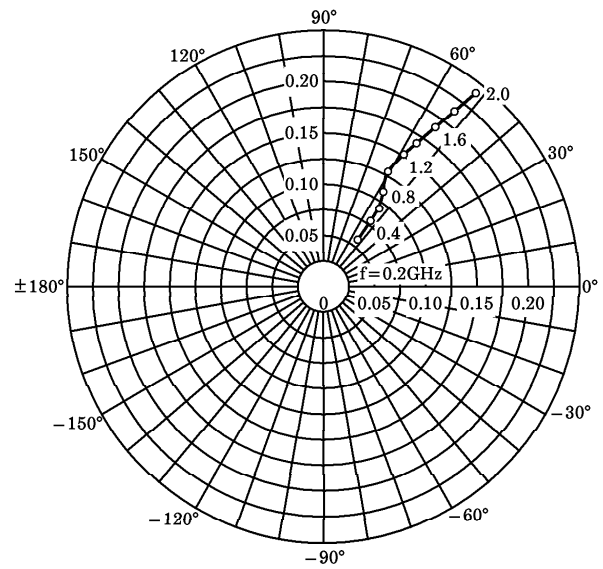
■ Typical Characteristics



**S<sub>11e</sub>**  
 $V_{CE} = 10\text{V}$   
 $I_C = 5\text{mA}$   
 $T_a = 25^\circ\text{C}$   
 (Unit :  $\Omega$ )



**S<sub>12e</sub>**  
 $V_{CE} = 10\text{V}$   
 $I_C = 5\text{mA}$   
 $T_a = 25^\circ\text{C}$

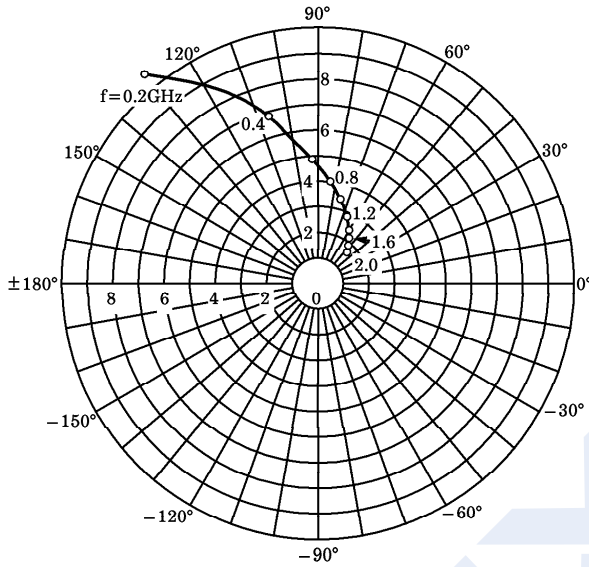


### NPN Transistors

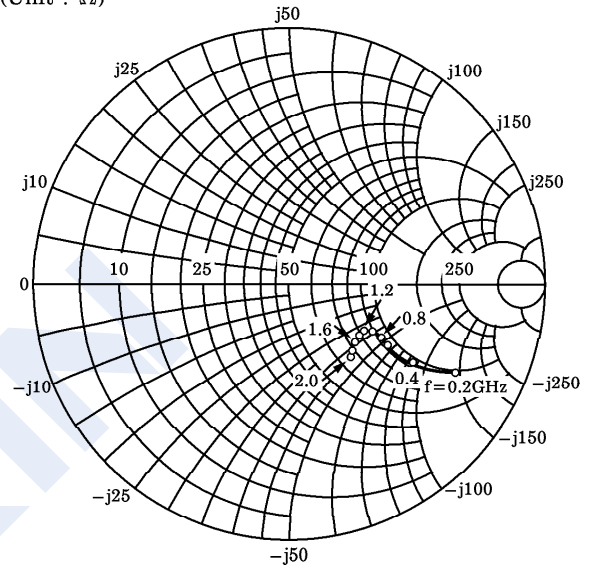
### 2SC3606

■ Typical Characteristics

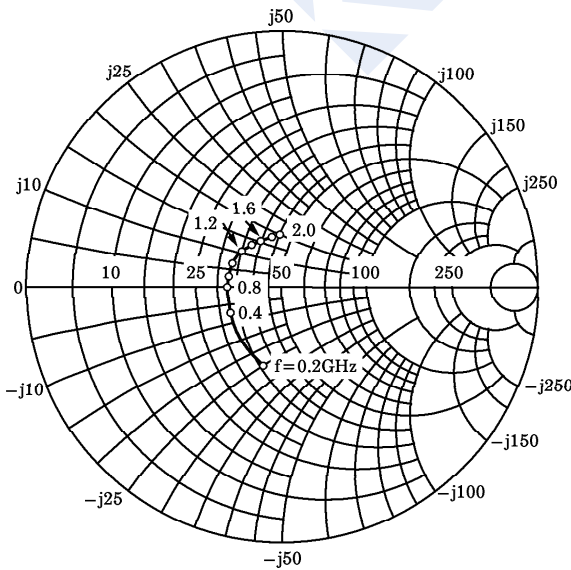
S<sub>21e</sub>  
 V<sub>CE</sub> = 10V  
 I<sub>C</sub> = 5mA  
 T<sub>a</sub> = 25°C



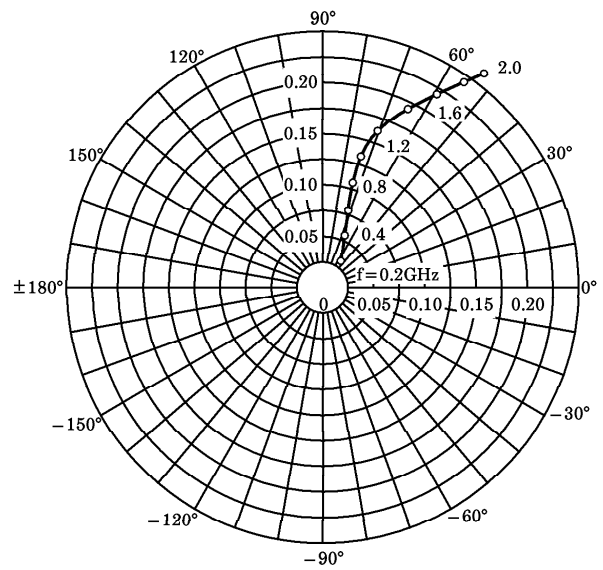
S<sub>22e</sub>  
 V<sub>CE</sub> = 10V  
 I<sub>C</sub> = 5mA  
 T<sub>a</sub> = 25°C  
 (Unit : Ω)



S<sub>11e</sub>  
 V<sub>CE</sub> = 10V  
 I<sub>C</sub> = 20mA  
 T<sub>a</sub> = 25°C  
 (Unit : Ω)



S<sub>12e</sub>  
 V<sub>CE</sub> = 10V  
 I<sub>C</sub> = 20mA  
 T<sub>a</sub> = 25°C



### NPN Transistors

### 2SC3606

■ Typical Characteristics

$S_{21e}$   
 $V_{CE} = 10V$   
 $I_C = 20mA$   
 $T_a = 25^\circ C$

$S_{22e}$   
 $V_{CE} = 10V$   
 $I_C = 20mA$   
 $T_a = 25^\circ C$   
 (Unit :  $\Omega$ )

