

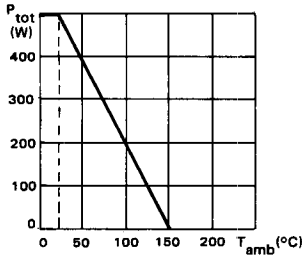
Compl. of BC 556 at 560

\* Preferred device  
Dispositif recommandé

- General purpose BC 546/BC 547/BC 548  
Usage général BC 546/BC 547/BC 548
- Low noise BC 549/BC 550  
Faible bruit BC 549/BC 550
- The BC 546 is available in A and B groups  
Le BC 546 est livrable dans les groupes A et B
- The BC 547, BC 548 in A-B-C groups and BC 549, BC 550 in B and C groups  
Les BC 547 et BC 548 dans les groupes A-B-C et Les BC 549 et BC 550 dans les groupes B et C

$V_{CE0}$	65 V	BC 546
	45 V	BC 547/BC 550
	30 V	BC 548/BC 549
$I_{CM}$	200 mA	

Maximum power dissipation  
Dissipation de puissance maximale



Plastic case F 139 B— See outline drawing CB-76 on last pages  
Boîtier plastique Voir dessin coté CB-76 dernières pages



Weight : 0,3 g.  
Masse

ABSOLUTE RATINGS (LIMITING VALUES)  
VALEURS LIMITES ABSOLUES D'UTILISATION

$T_{amb} = +25\text{ }^{\circ}\text{C}$

(Unless otherwise stated)  
(Sauf indications contraires)

		BC 546	BC 547	BC 548	BC 549	BC 550	
Collector-base voltage Tension collecteur-base	$V_{CBO}$	80	50	30	30	50	V
Collector-emitter voltage Tension collecteur-émetteur	$V_{CEO}$	65	45	30	30	45	V
Emitter-base voltage Tension émetteur-base	$V_{EBO}$	6	6	5	5	5	V
Collector current Courant collecteur	$I_C$	200	200	200	200	200	mA
Power dissipation Dissipation de puissance	$P_{tot}$	500	500	500	500	500	mW
Junction temperature Température de jonction	max. $T_j$	+150	+150	+150	+150	+150	°C
Storage temperature Température de stockage	max. $T_{stg}$	- 65	- 65	- 65	- 65	- 65	°C
	min.	+150	+150	+150	+150	+150	°C

NOTES

**STATIC CHARACTERISTICS**  
*CARACTERISTIQUES STATIQUES*

$T_{amb} = 25^{\circ}C$

(Unless otherwise stated)  
(Sauf indications contraires)

	Test conditions <i>Conditions de mesure</i>			Min.	Typ.	Max.	
Collector-base cut-off current <i>Courant résiduel collecteur-base</i>	$V_{CB} = 30V$ $I_E = 0$	$I_{CBO}$				15	nA
	$V_{CB} = 30V$ $I_E = 0$ $T_{amb} = 150^{\circ}C$					5	$\mu A$
Collector-emitter breakdown voltage <i>Tension de claquage collecteur-émetteur</i>	$I_C = 2mA$ $I_B = 0$	$V_{(BR)CEO}$	BC 546			65	V
			BC 547 BC 550			45	
			BC 548 BC 549			30	
Emitter-base breakdown voltage <i>Tension de claquage émetteur-base</i>	$I_E = 1\mu A$ $I_C = 0$	$V_{(BR)EBO}$	BC 546 BC 547			6	V
			BC 548 BC 549 BC 550			5	
Collector-emitter saturation voltage <i>Tension de saturation collecteur-émetteur</i>	$I_C = 10mA$ $I_B = 0,5mA$	$V_{CEsat}$				90	mV
	$I_C = 100mA$ $I_B = 5mA$					200	
Base-emitter saturation voltage <i>Tension de saturation base-émetteur</i>	$I_C = 10mA$ $I_B = 0,5mA$	$V_{BEsat}$				700	mV
	$I_C = 100mA$ $I_B = 5mA$					900	

**STATIC CHARACTERISTICS**  
*CARACTERISTIQUES STATIQUES*

$T_{amb} = 25^{\circ}C$

(Unless otherwise stated)  
(Sauf indications contraires)

	Test conditions <i>Conditions de mesure</i>			Min.	Typ.	Max.	
Base-emitter voltage <i>Tension base-émetteur</i>	$V_{CE} = 5V$ $I_C = 2mA$	$V_{BE}$		580	660	700	mV
	$V_{CE} = 5V$ $I_C = 10mA$				770		
Static forward current transfer ratio <i>Valeur statique du rapport de transfert direct du courant</i>	$V_{CE} = 5V$ $I_C = 10\mu A$	$h_{21E}$	A	90			
			B	150			
			C	270			
	$V_{CE} = 5V$ $I_C = 2mA$		A	110	180	220	
			B	200	290	450	
			C	420	520	800	

**DYNAMIC CHARACTERISTICS**  
*CARACTERISTIQUES DYNAMIQUES*

Input impedance <i>Impédance d'entrée</i>	$V_{CE} = 5V$ $I_C = 2mA$ $f = 1kHz$	$h_{11e}$	A	1,6	2,7	4,5	k $\Omega$	
			B	3,2	4,5	8,5		
			C	6	8,7	15		
Reverse voltage transfer ratio <i>Rapport de transfert inverse de la tension</i>		$V_{CE} = 5V$ $I_C = 2mA$ $f = 1kHz$	$h_{12e}$	A	1,5			$10^{-4}$
				B	2			
				C	3			
Forward current transfer ratio <i>Rapport de transfert direct du courant</i>	$V_{CE} = 5V$ $I_C = 2mA$ $f = 1kHz$		$h_{21e}$	A	125	220	260	
				B	240	330	500	
				C	450	600	900	
Output admittance <i>Admittance de sortie</i>		$V_{CE} = 5V$ $I_C = 2mA$ $f = 1kHz$	$h_{22e}$	A	18	30		$\mu S$
				B	30	60		
				C	60	110		

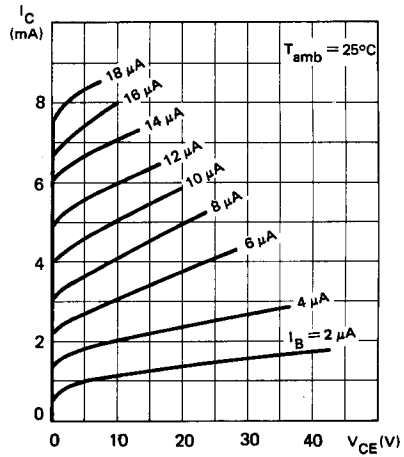
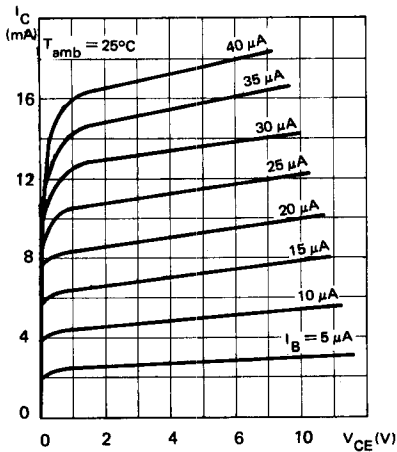
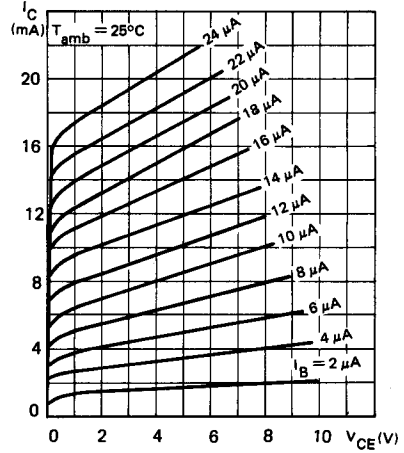
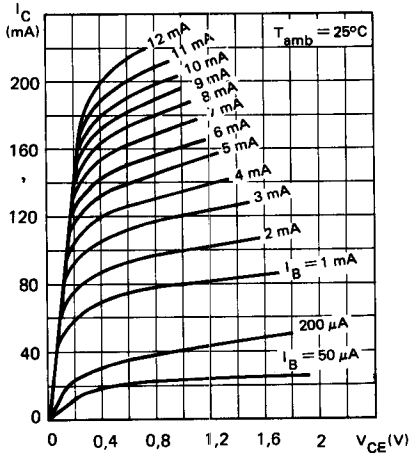
**DYNAMIC CHARACTERISTICS**  
**CARACTERISTIQUES DYNAMIQUES**

$T_{amb} = 25^{\circ} C$

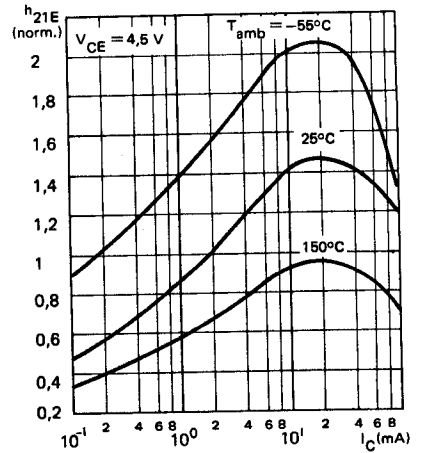
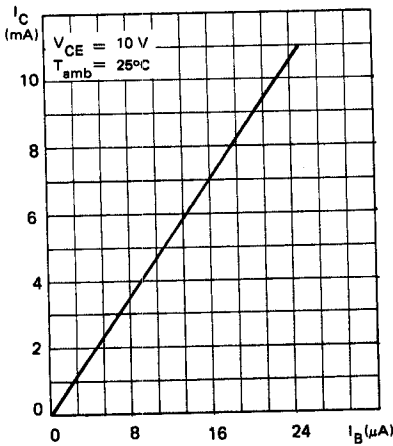
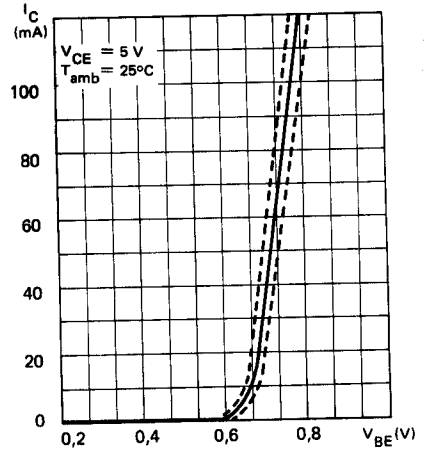
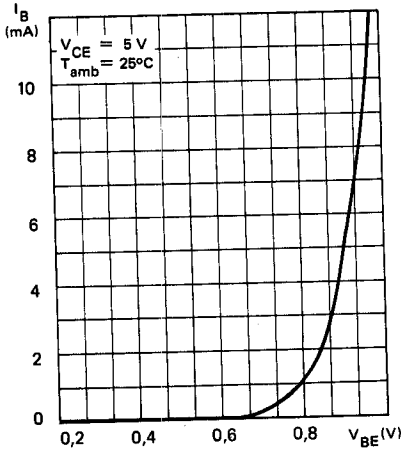
(Unless otherwise stated)  
 (Sauf indications contraires)

	Test conditions <i>Conditions de mesure</i>			Min. Typ. Max.	
Transition frequency <i>Fréquence de transition</i>	$V_{CE} = 5 V$ $I_C = 10 mA$ $f = 35 MHz$	$f_T$		300	MHz
Collector base capacitance <i>Capacité collecteur-base</i>	$V_{CB} = 10 V$ $I_E = 0$ $f = 1 MHz$	$C_{CB0}$		2,5 4,5	pF
Emitter base capacitance <i>Capacité émetteur-base</i>	$V_{EB} = 0,5 V$ $I_C = 0$ $f = 1 MHz$	$C_{EBO}$		9	pF
Noise figure <i>Facteur de bruit</i>	$V_{CE} = 5 V$ $I_C = 200 \mu A$ $R_g = 2 k\Omega$ $f = 1 kHz$ $B = 200 Hz$	F	BC 546 BC 547 BC 548	2 10	dB
			BC 549	1,2 4	
			BC 550	1 4	
Equivalent noise voltage <i>Tension équivalente de bruit</i>	$V_{CE} = 5 V$ $I_C = 200 \mu A$ $R_g = 2 k\Omega$ $f = 10 \div 50 Hz$	$V_n$		0,135	

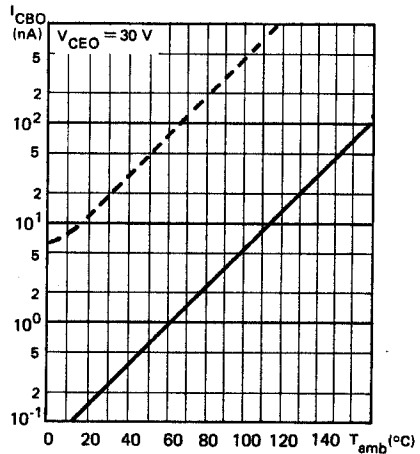
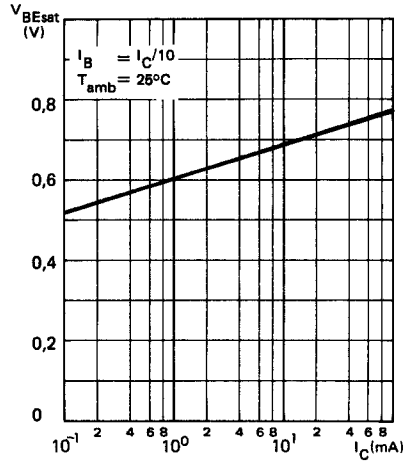
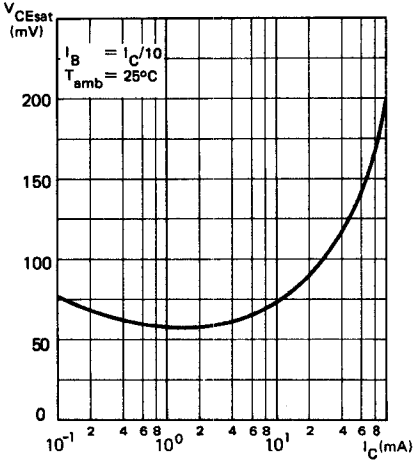
**STATIC CHARACTERISTICS**  
*CARACTERISTIQUES STATIQUES*



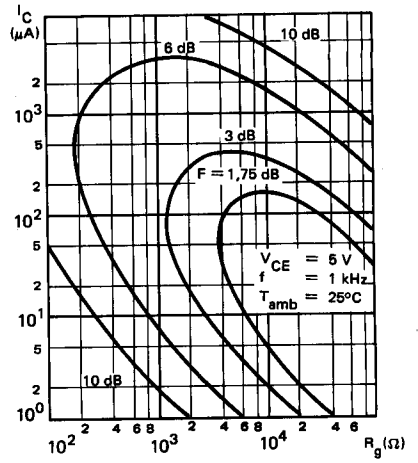
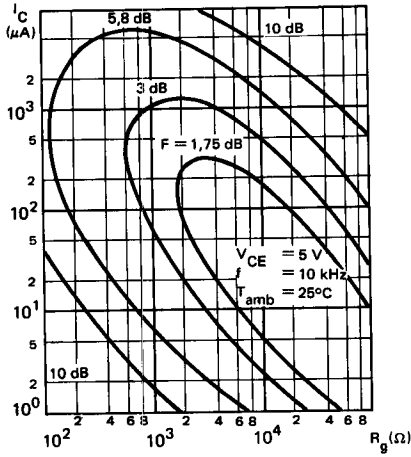
STATIC CHARACTERISTICS  
 CARACTERISTIQUES STATIQUES



**STATIC CHARACTERISTICS**  
*CARACTERISTIQUES STATIQUES*

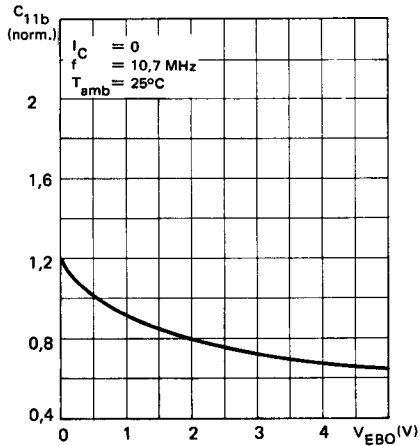
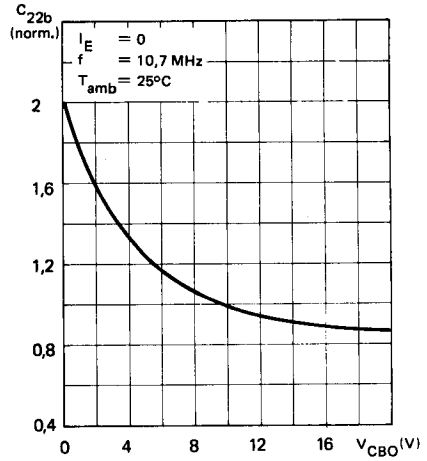
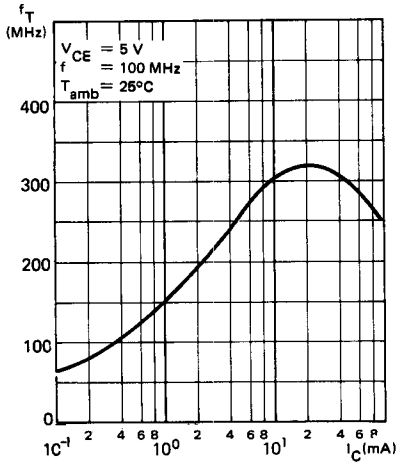


**DYNAMIC CHARACTERISTICS**  
*CARACTERISTIQUES DYNAMIQUES*

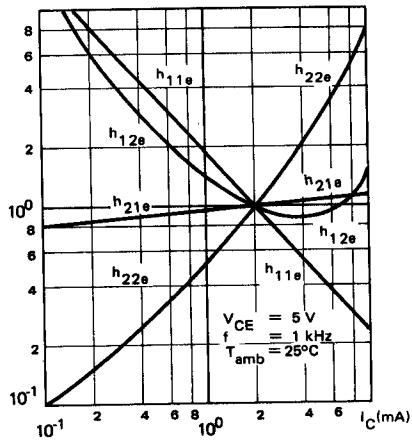
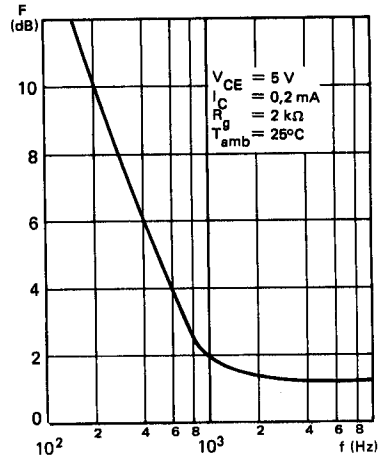
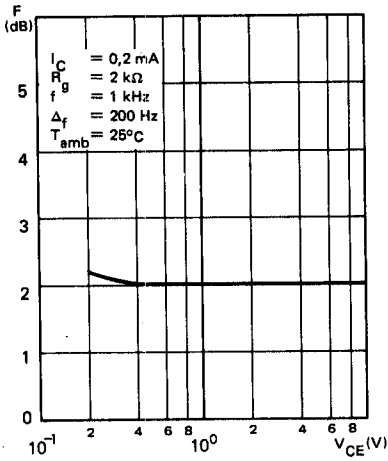




**DYNAMIC CHARACTERISTICS**  
*CARACTERISTIQUES DYNAMIQUES*



**DYNAMIC CHARACTERISTICS**  
*CARACTERISTIQUES DYNAMIQUES*



**STATIC CHARACTERISTICS**  
**CARACTERISTIQUES STATIQUES**

$T_{amb} = 25^{\circ}C$

(Unless otherwise stated)  
 (Sauf indications contraires)

	Test conditions <i>Conditions de mesure</i>			Min.	Typ.	Max.			
Collector-base cut-off current <i>Courant résiduel collecteur-base</i>	$V_{CB} = -20 V$ $I_E = 0$	$I_{CBO}$		-1		-15	nA		
	$V_{CB} = -20 V$ $I_E = 0$ $T_{amb} = 150^{\circ}C$						-4	$\mu A$	
Collector-emitter breakdown voltage <i>Tension de claquage collecteur-émetteur</i>	$I_C = -2 mA$ $I_E = 0$	$V_{(BR)CEO}$					BC 556 -65		
							BC 557 -45		
							BC 560 -45		
							BC 558 -30		
BC 559 -25									
Collector-emitter breakdown voltage <i>Tension de claquage émetteur-base</i>	$I_E = -10 \mu A$ $I_C = 0$	$V_{(BR)EBO}$					-5	V	
Collector-emitter saturation voltage <i>Tension de saturation collecteur-émetteur</i>	$I_C = -10 mA$ $I_B = -0,5 mA$	$V_{CEsat}$					-75	-300	
	$I_C = -100 mA$ $I_B = -5 mA$						-250	-850	
Base-emitter saturation voltage <i>Tension de saturation base-émetteur</i>	$I_C = -10 mA$ $I_B = -0,5 mA$	$V_{BEsat}$					-700	mV	
	$I_C = -100 mA$ $I_B = -5 mA$						-850		
Base-emitter voltage <i>Tension base-émetteur</i>	$V_{CE} = -5 V$ $I_C = -2 mA$	$V_{BE}$					-600	-650	-750
	$V_{CE} = -5 V$ $I_C = -10 mA$						-820		

**STATIC CHARACTERISTICS (Following) T<sub>amb</sub> = 25 ° C** (Unless otherwise stated)  
**CARACTERISTIQUES STATIQUES (Suite)** (Sauf indications contraires)

	Test conditions <i>Conditions de mesure</i>			Min.	Typ.	Max.	
Static forward current transfer ratio <i>Valeur statique du rapport de transfert direct du courant</i>		h <sub>21E</sub>	BC 556	75		475	
			BC 557	75		475	
			BC 558	75		850	
			BC 559	125		850	
			BC 560	125		475	
			cl. A	125		450	
			cl. B	220		475	
			cl. C	450		850	

**DYNAMIC CHARACTERISTICS**  
**CARACTERISTIQUES DYNAMIQUES**

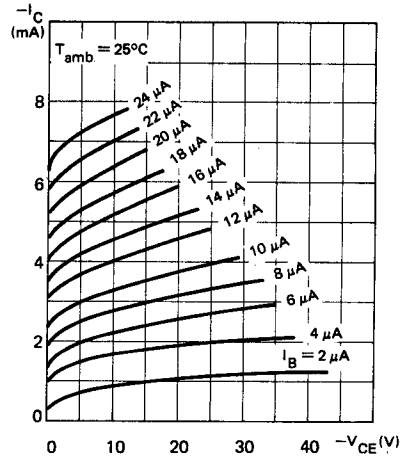
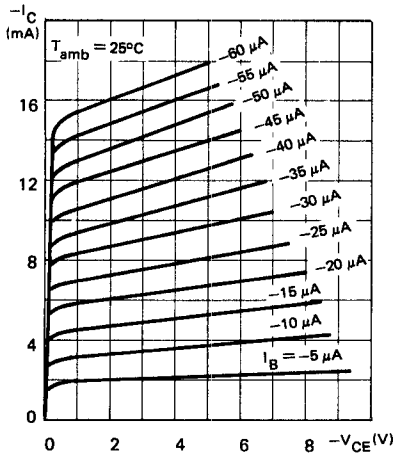
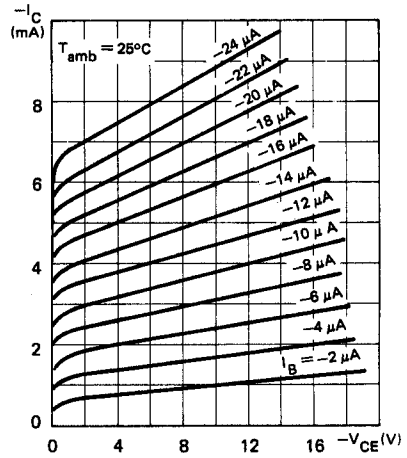
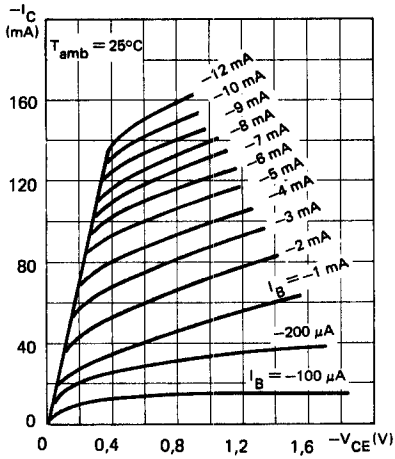
Forward current transfer ratio <i>Rapport de transfert direct du courant</i>	V <sub>CE</sub> = -5 V I <sub>C</sub> = -2 mA f = 1 kHz	h <sub>21e</sub>	BC 556	75		500	
			BC 557	75		500	
			BC 558	75		900	
			BC 559	125		900	
			BC 560	125		500	
			cl. A	125		260	
			cl. B	240		500	
			cl. C	450		900	
Input impedance <i>Impédance d'entrée</i>		h <sub>11e</sub>	cl. A	1,6	2,7	4,5	kΩ
			cl. B	3,2	4,5	8,5	
			cl. C	6	8,7	15	
Reverse voltage transfer ratio <i>Rapport de transfert inverse de la tension</i>	V <sub>CE</sub> = -5 V I <sub>C</sub> = -2 mA f = 1 kHz	h <sub>12e</sub>	cl. A	1,5		10 <sup>-4</sup>	
			cl. B	2			
			cl. C	3			
Output admittance <i>Admittance de sortie</i>		h <sub>22e</sub>	cl. A	18	30	μS	
			cl. B	30	60		
			cl. C	6	110		

**DYNAMIC CHARACTERISTICS (Following)  $T_{amb} = 25^{\circ}C$**   
**CARACTERISTIQUES DYNAMIQUES (Suite)**

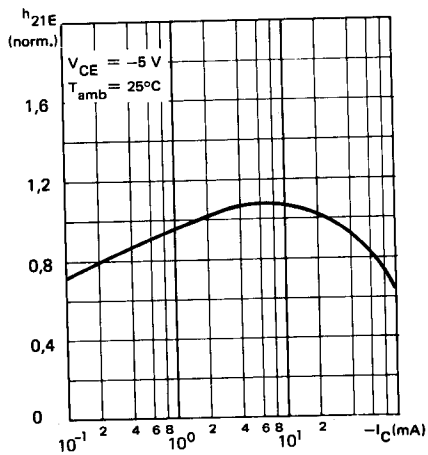
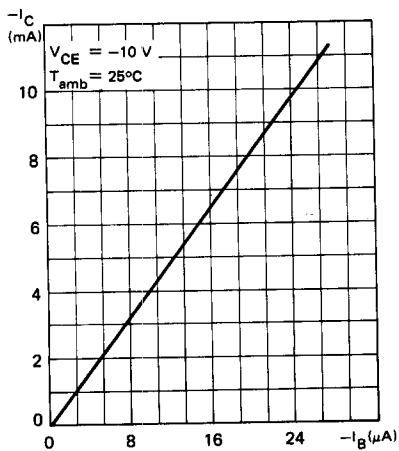
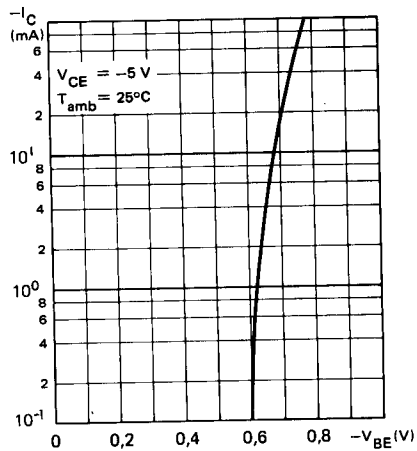
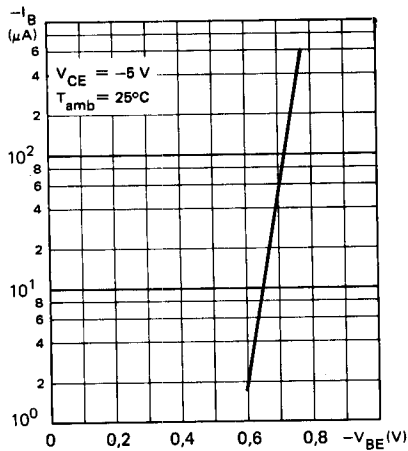
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	Test conditions <i>Conditions de mesure</i>			Min. Typ. Max.	
Transition frequency <i>Fréquence de transition</i>	$V_{CE} = -5V$ $I_C = -10mA$ $f = 35MHz$	$f_T$		150	MHz
Output capacitance <i>Capacité de sortie</i>	$V_{CB} = -10V$ $I_E = 0$ $f = 1MHz.$	$C_{22b}$		4,5	pF
Noise figure <i>Facteur de bruit</i>	$V_{CE} = -5V$ $I_C = -200\mu A$ $R_g = 2k\Omega$ $f_g = 1kHz$ $B = 200Hz$	F	BC 556 BC 557 BC 558	2 10	dB
			BC 559 BC 560	1 4	
Equivalent noise voltage <i>Tension équivalente de bruit</i>	$V_{CE} = -5V$ $I_C = -200\mu A$ $R_g = 2k\Omega$ $f = 10 \div 50Hz$	$V_n$	BC 559 BC 560	0,11	$\mu V$

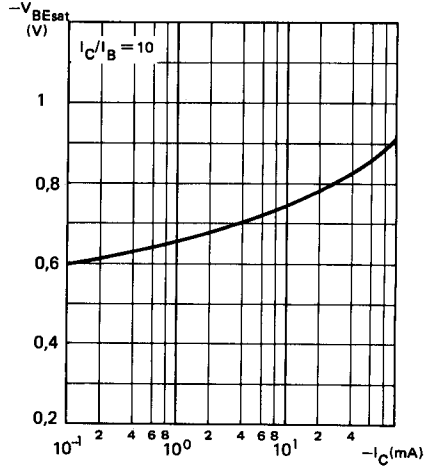
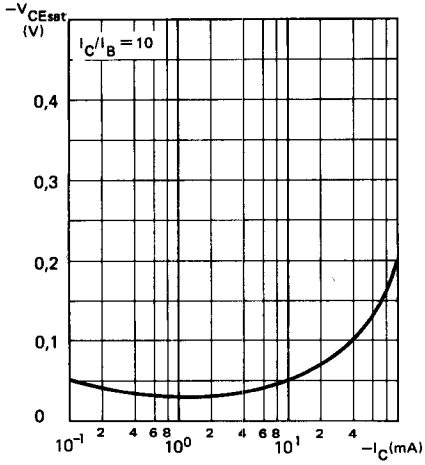
STATIC CHARACTERISTICS  
 CARACTERISTIQUES STATIQUES



STATIC CHARACTERISTICS (Following)  
 CARACTERISTIQUES STATIQUES (Suite)

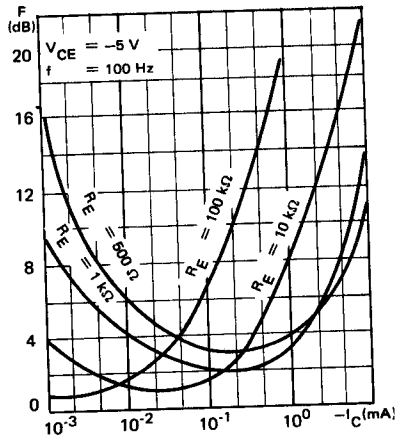
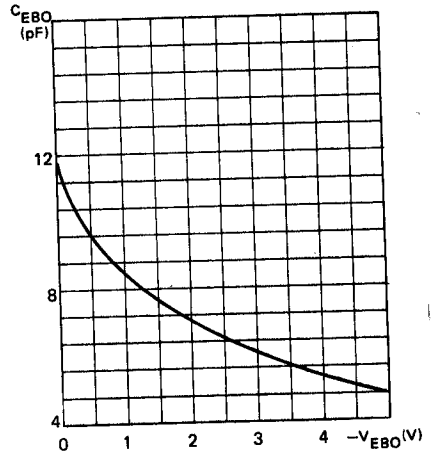
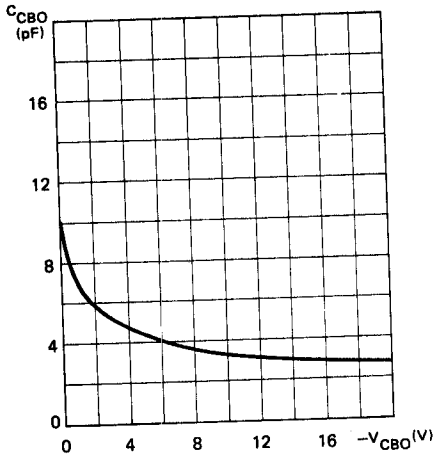


**STATIC CHARACTERISTICS (Following)**  
*CARACTERISTIQUES STATIQUES (Suite)*





**DYNAMIC CHARACTERISTICS**  
*CARACTERISTIQUES DYNAMIQUES*



**DYNAMIC CHARACTERISTICS (Following)**  
*CARACTERISTIQUES DYNAMIQUES (Suite)*

