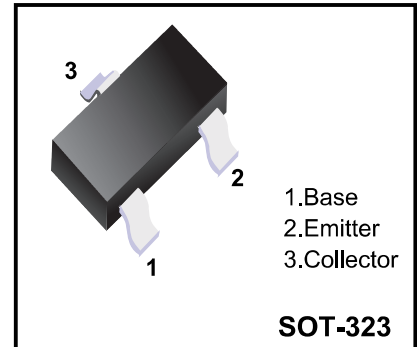


■ NPN Transistor



■ Features

- High DC Current Gain:hFE=200(typ)
- High Voltage:V<sub>CEO</sub>=50V
- Complementary to 2SA1611

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V <sub>CB0</sub>	60	V
Collector - Emitter Voltage	V <sub>CEO</sub>	50	
Emitter - Base Voltage	V <sub>EB0</sub>	5	
Collector Current - Continuous	I <sub>c</sub>	100	mA
Collector Power Dissipation	P <sub>c</sub>	150	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to 150	

■ Electrical Characteristics Ta = 25°C

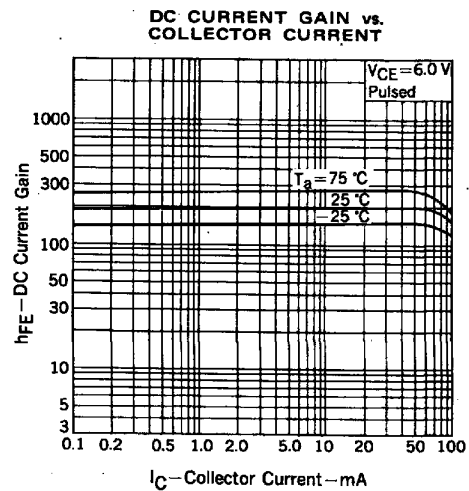
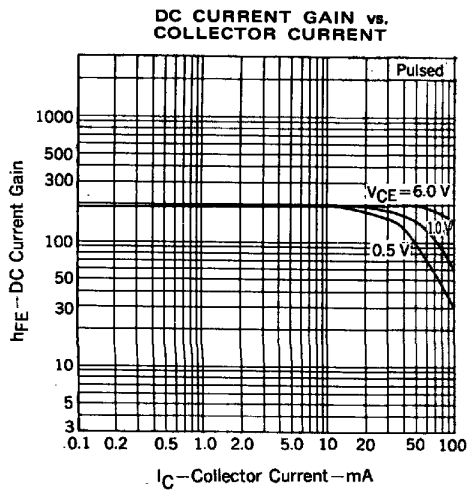
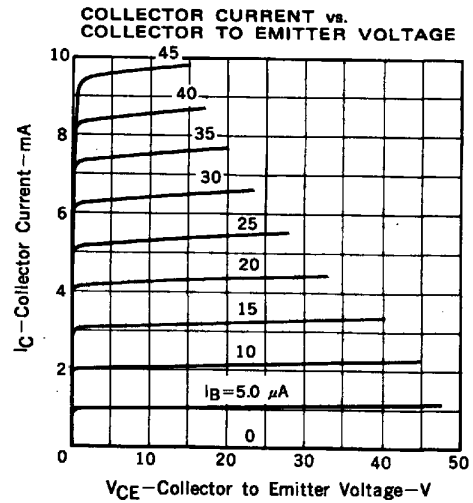
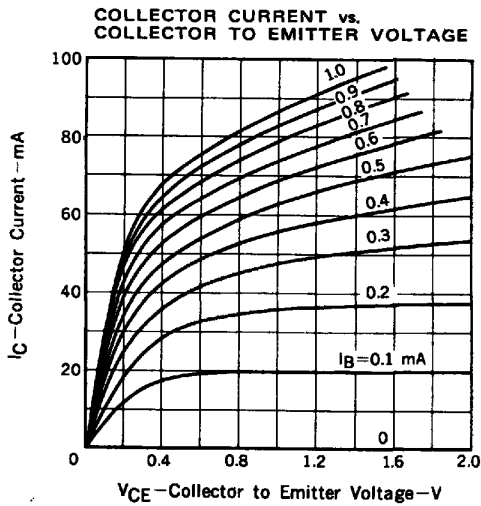
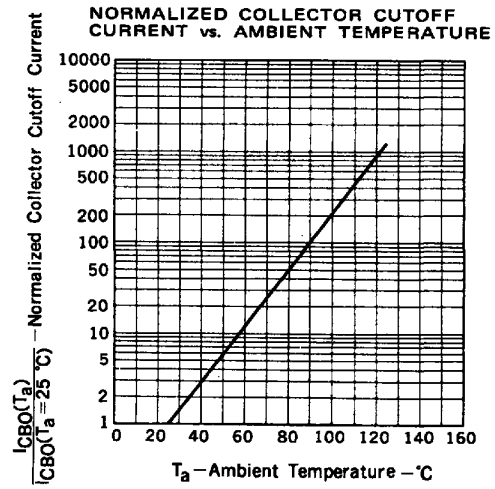
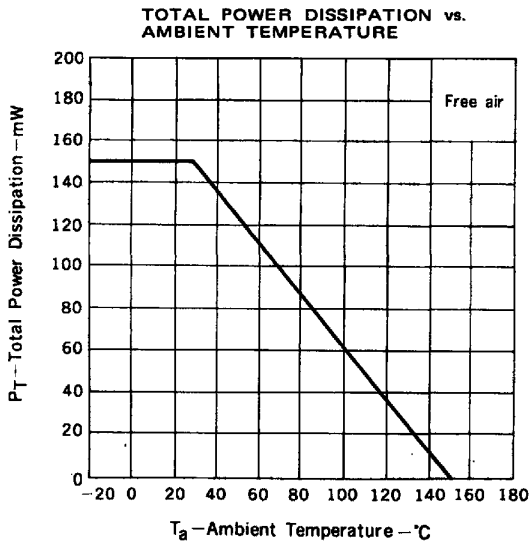
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V <sub>CB0</sub>	I <sub>c</sub> = 100 μA, I <sub>E</sub> = 0	60			V
Collector- emitter breakdown voltage	V <sub>CEO</sub>	I <sub>c</sub> = 1 mA, I <sub>B</sub> = 0	50			
Emitter - base breakdown voltage	V <sub>EB0</sub>	I <sub>E</sub> = 100 μA, I <sub>c</sub> = 0	5			
Collector-base cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = 60V, I <sub>E</sub> = 0			0.1	μA
Emitter cut-off current	I <sub>EB0</sub>	V <sub>EB</sub> = 5V, I <sub>c</sub> =0			0.1	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =100 mA, I <sub>B</sub> =10mA		0.15	0.3	V
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>c</sub> =100 mA, I <sub>B</sub> =10mA		0.86	1	
Base - emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> = 6V, I <sub>c</sub> = 1mA	0.55	0.62	0.65	
DC current gain *1	h <sub>FE</sub>	V <sub>CE</sub> = 6V, I <sub>c</sub> = 1mA	90	200	600	
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 6V, I <sub>E</sub> =0,f=1MHz		3		pF
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 6V, I <sub>E</sub> =-10mA		250		MHz

\*1 :Pulse:Pw ≤ 350us Duty Cycle ≤ 2%

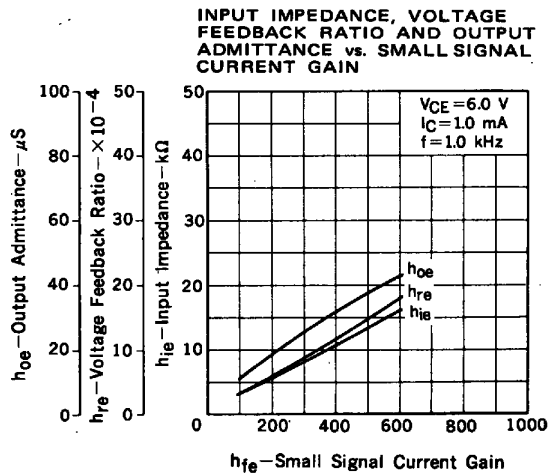
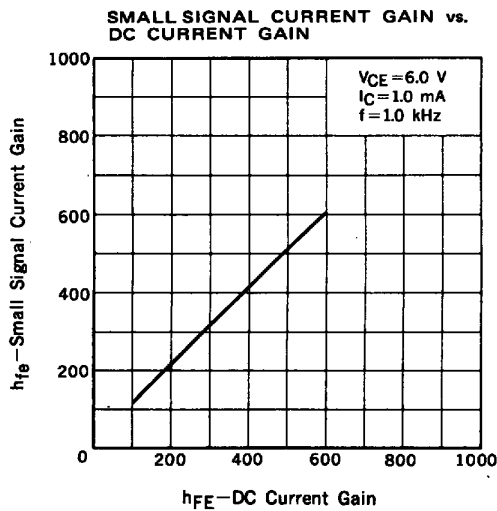
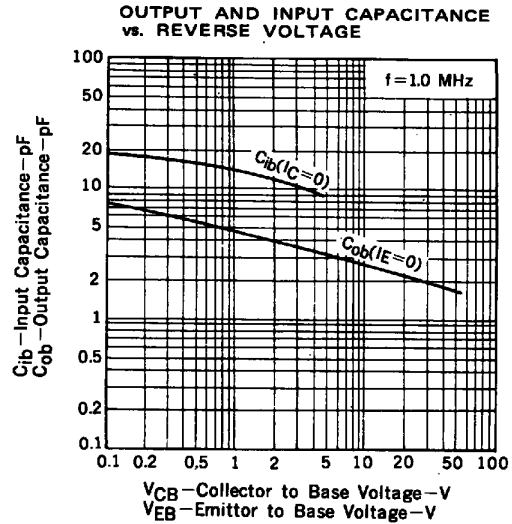
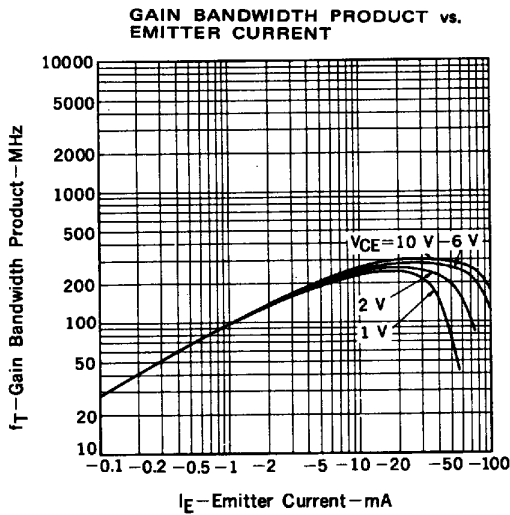
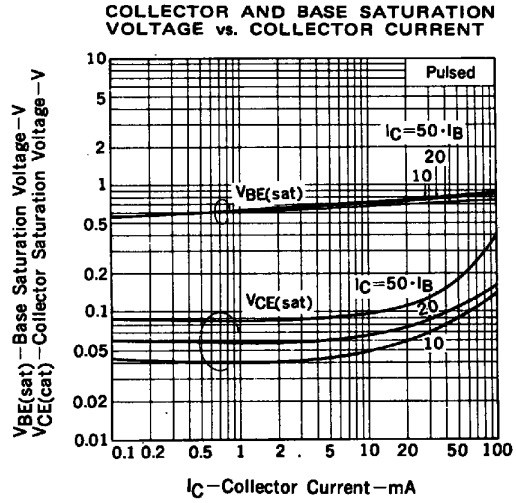
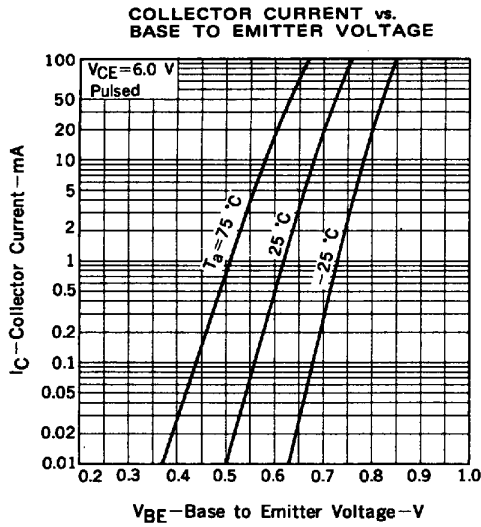
■ Classification of hfe

Type	2SC4177-L4	2SC4177-L5	2SC4177-L6	2SC4177-L7
Range	90-180	135-270	200-400	300-600
Marking	L4	L5	L6	L7

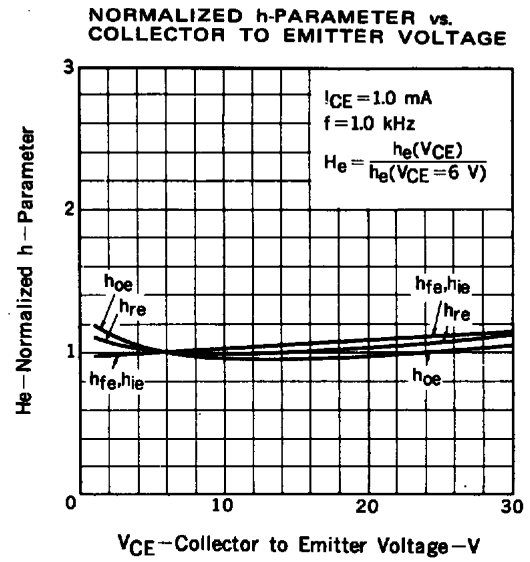
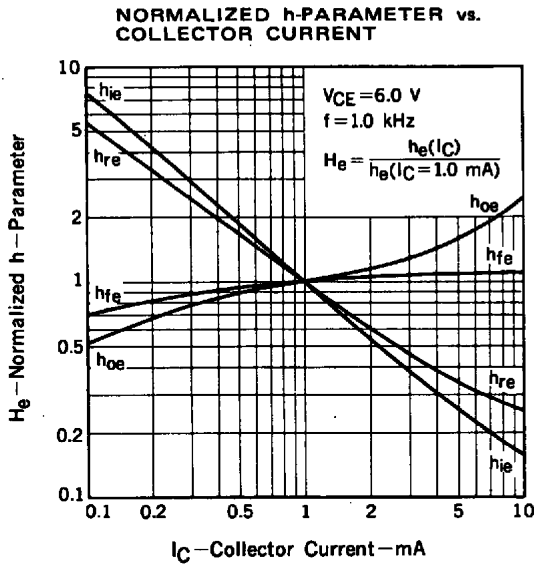
■ Typical Characteristics



■ Typical Characteristics



■ Typical Characteristics



**Ordering information**

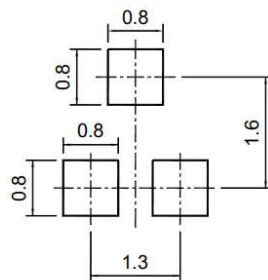
Package	Packing Description	Base Quantity	Packing Quantity
SOT-323	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

**Package Dimensions**

**SOT-323**

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.8	1.1	32	43
A1	0.1		4	
bp	0.3	0.4	12	16
C	0.10	0.25	4	10
D	1.8	2.2	71	87
E	1.15	1.35	45	53
E	1.3		51	
E1	0.65		26	
HE	2.0	2.2	79	87
Lp	0.15	0.45	6	18
Q	0.13	0.23	5.1	9
v	0.2		8	
W	0.2		8	

**The recommended mounting pad size**



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