

FEATURES

Complementary type the PNP transistor
A1015 is recommended.

2SC1815 (NPN)

MARKING: HF

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current -Continuous	I_C	150	mA
Collector Power Dissipation	P_C	0.2	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C



ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	VCBO	IC= 100uA, IE=0	60			V
Collector-emitter breakdown voltage	VCEO	IC= 0.1mA, IB=0	50			V
Emitter-base breakdown voltage	VEBO	IE=100uA, IC=0	5			V
Collector cut-off current	ICBO	VCB=60V, IE=0			0.1	uA
Collector cut-off current	ICE	VCE=50V, IB=0			0.1	uA
Emitter cut-off current	IEB	VEB= 5V, IC=0			0.1	uA
DC current gain	hFE	VCE= 6V, IC= 2mA	130		400	
Collector-emitter saturation voltage	VCE(sat)	IC=100mA, IB= 10mA			0.25	V
Base-emitter saturation voltage	VBE(sat)	IC=100mA, IB= 10mA			1	V
Transition frequency	fT	VCE=10V, IC= 1mA, f=30MHz	80			MHz

CLASSIFICATION OF hFE

Rank	L	H	
Range	130-200	200-400	

2SC1815 Typical Characteristics

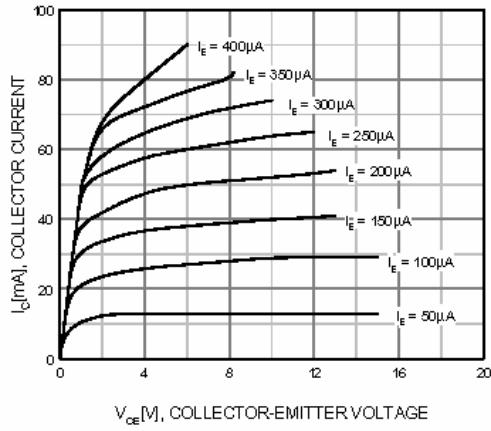


Figure 1. Static Characteristic

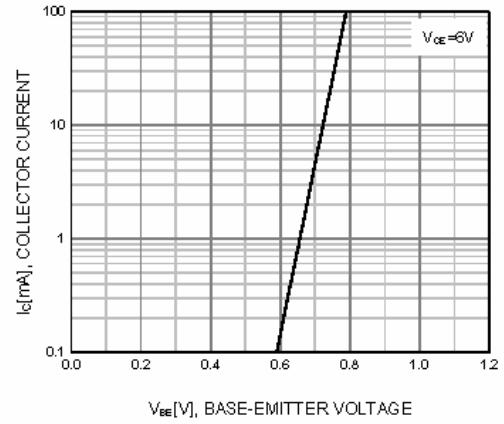


Figure 2. Transfer Characteristic

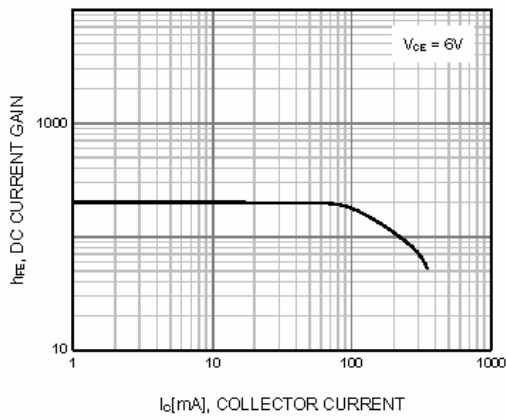


Figure 3. DC current Gain

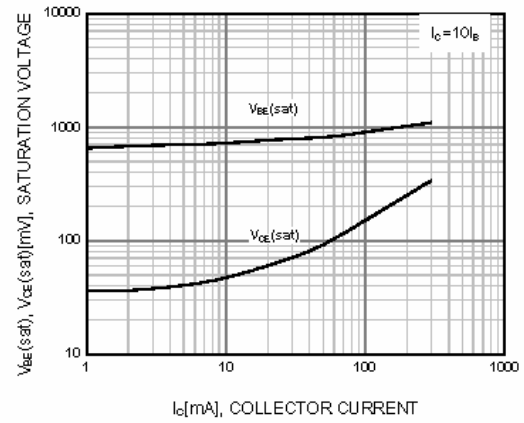


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

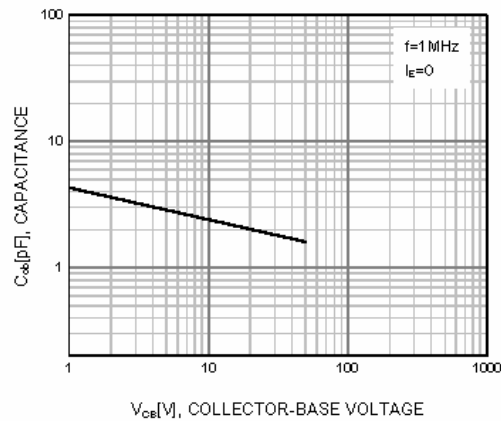


Figure 5. Output Capacitance

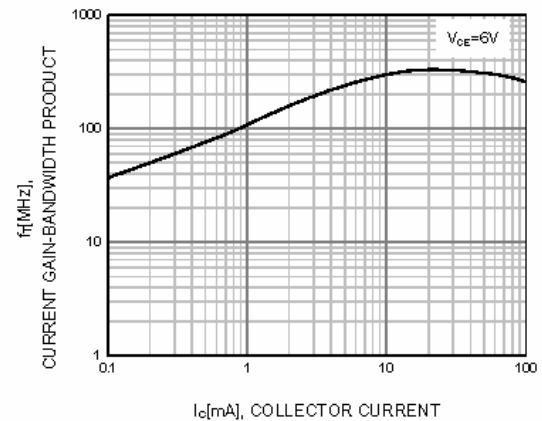


Figure 6. Current Gain Bandwidth Product