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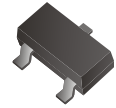


# General Purpose Transistors



SMD Diodes Specialist

## C1815-G (NPN) RoHS Device

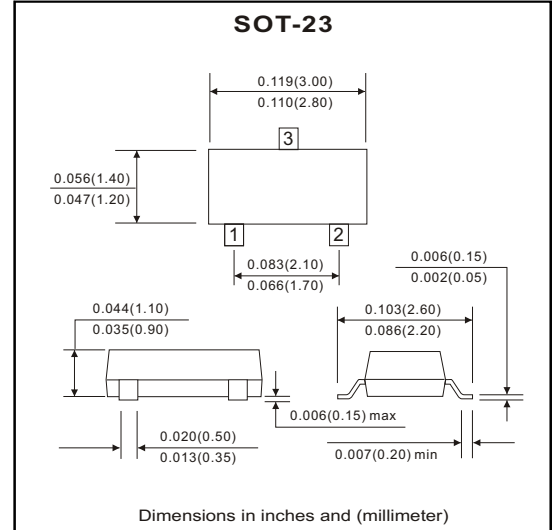
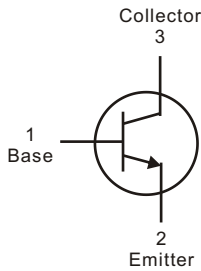


### Features

-Power dissipation

$$P_{CM}=0.2W$$

### Marking: HF



### Maximum Ratings (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base voltage	V <sub>CBO</sub>	-60	V
Collector-Emitter voltage	V <sub>CEO</sub>	-50	V
Emitter-Base voltage	V <sub>EBO</sub>	-5	V
Collector current-continuous	I <sub>C</sub>	150	mA
Total device dissipation	P <sub>D</sub>	200	mW
Junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

### Electrical Characteristics (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ.	Max	Unit
Collector-Base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μA, I <sub>E</sub> =0	60			V
Collector-Emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =100μA, I <sub>B</sub> =0	50			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =60V, I <sub>E</sub> =0			0.1	A
Collector cut-off current	I <sub>CEO</sub>	V <sub>CE</sub> =50V, I <sub>B</sub> =0			0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0			0.1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =6V, I <sub>C</sub> =2mA	130		400	
Collector-Emitter saturation voltage	V <sub>CE(SAT)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA			0.25	V
Base-Emitter saturation voltage	V <sub>BE(SAT)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA			1	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1mA f=30MHz	80			MHz

### Classification of h<sub>FE</sub>

Rank	L	H
Range	130 ~ 200	200 ~ 400

## RATING AND CHARACTERISTIC CURVES (C1815-G)

Fig.1  $I_c$  vs.  $V_{CE}$  Characteristics

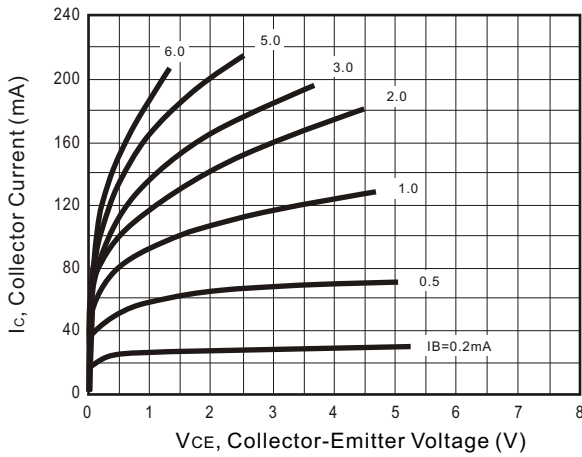


Fig.2 DC Current Gain Characteristics

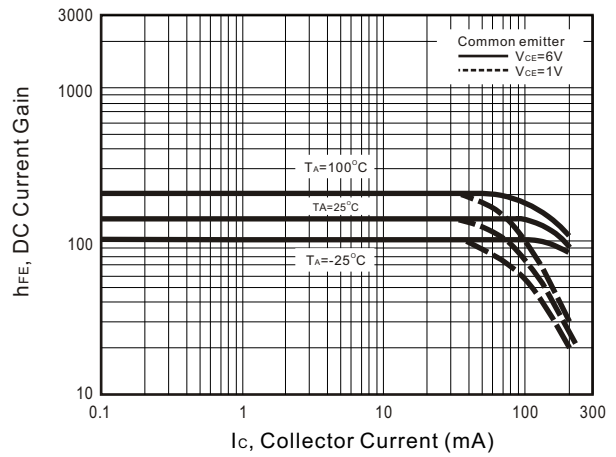


Fig.3 Collector-Emitter Saturation Characteristics

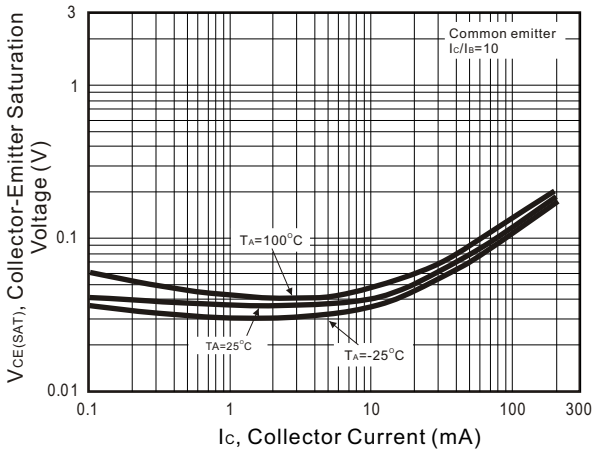


Fig.4 Base-Emitter Saturation Characteristics

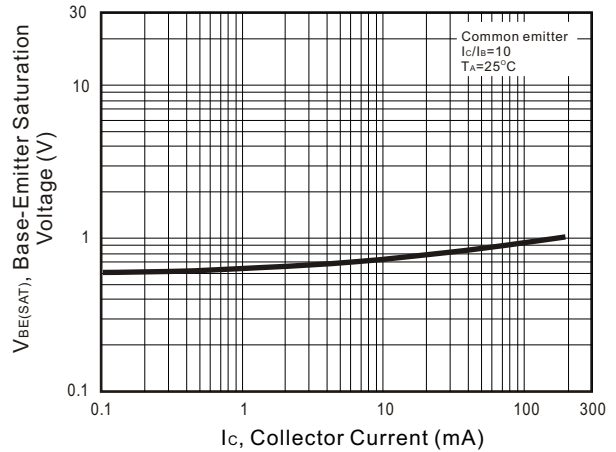


Fig.5 Collector Power Derating Curve

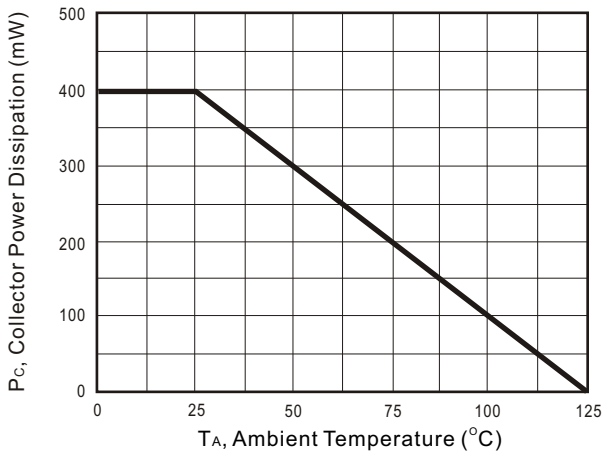


Fig.6 Transition Frequency Characteristics

