



## **PNP Silicon Epitaxial Planar Transistor**

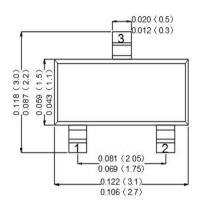
**SOT-23** 

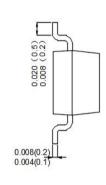
#### **Features**

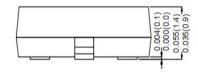
- Low frequency transistor
- The transistor is subdivided into two groups Q and R according to its DC current gain.
- Low  $V_{CE(sat)}$ . $V_{CE(sat)}$ <-0.5 $V(I_C / I_B = -0.5A /-50mA)$
- IC =-0.8A.
- Complements the MMBTSD1781.

#### **Mechanical Data**

- Case:Molded Plastic,SOT-23
- Epoxy:UL 94V-0 rate flame retardant
- Terminals:Plated Leads Solderable perMIL-STD-750,Method-2026.
- Marking: CLASSIFICATION OF hFE
- Mounting Position : Any.
- Equivalent Circuit:







Dimensions in inches and (millimeters)

## Maximum Ratings Maximum Ratings (Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit	
Collector Base Voltage	-V <sub>CBO</sub>	40	V	
Collector Emitter Voltage	-V <sub>CEO</sub>	32	V	
Emitter Base Voltage	-V <sub>EBO</sub>	5	V	
Collector Current	-l <sub>C</sub>	800	mA	
Power Dissipation	P <sub>tot</sub>	200	mW	
Junction Temperature	T <sub>j</sub>	150	°C	
Storage Temperature Range	T <sub>S</sub>	-55 to +150	°C	

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Electrical Characteristics (Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	est conditions	Min	Тур	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =-50μΑ, I <sub>E</sub> =0	-40			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -1mA, I <sub>B</sub> =0	-32			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -50μΑ, I <sub>C</sub> =0	-5			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =-20V,I <sub>E</sub> =0			-0.5	μΑ
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -4V,I <sub>C</sub> =0			-0.5	μΑ
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =-3V,I <sub>C</sub> = -100mA	120		390	
Collector-emitter saturation voltage	V <sub>CE</sub> (sat)	I <sub>C</sub> =-500 mA, I <sub>B</sub> = -50mA			-0.5	V
Transition frequency	f⊤	V <sub>CE</sub> =-5V, I <sub>C</sub> = -50mA, f=100MHz	50	200		MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V,I <sub>E</sub> =0,f=1MHz		12	30	pF

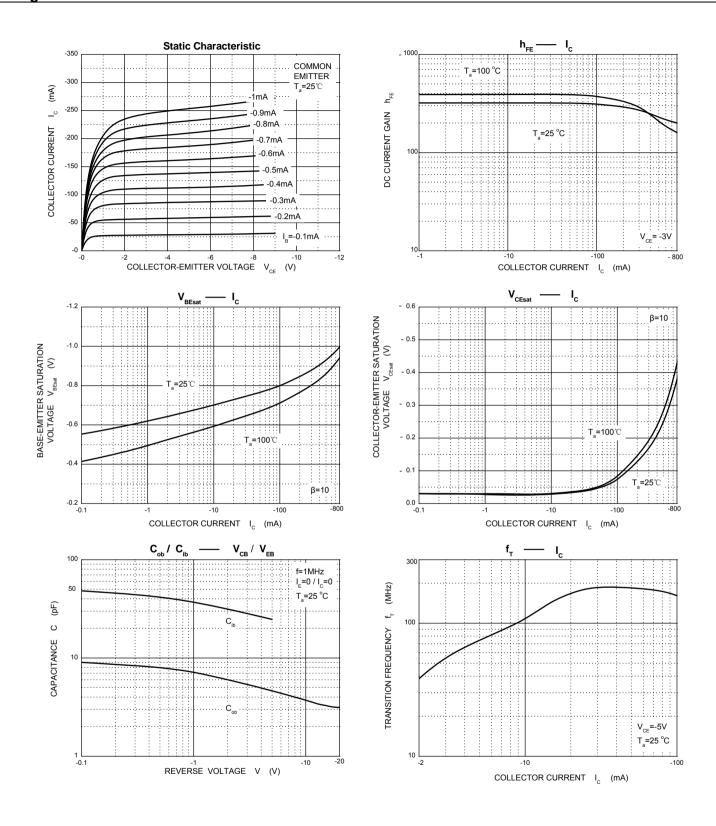
### **CLASSIFICATION OF hFE**

Rank	Q	R
Range	120-270	180-390
Marking	AHQ	AHR

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### **Rating And Characteristic Curves**



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