

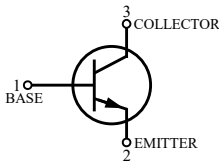
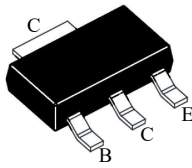


BCP56-10H / BCP56-16H

NPN TRANSISTORS

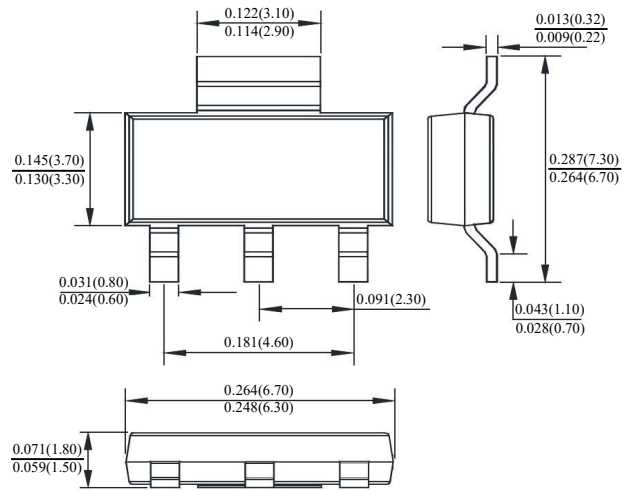
FEATURES

- Medium Power Transistor
- Suffix "H" indicates Halogen-free parts, ex. BCP56-10H



B	Base
C	Collector
E	Emitter

SOT-223



Dimensions in inches and (millimeter)

Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	100	V
Collector Emitter Voltage	V_{CEO}	80	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1	A
Peak Collector Current	I_{CM}	1.5	A
Peak Base Current	I_{BM}	0.2	A
Power Dissipation	P_{tot}	1.33	W
Thermal Resistance from Junction to Ambient (Note 1)	$R_{\theta JA}$	94	$^\circ\text{C}/\text{W}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Note:

1. Device mounted on FR4 substrate PC board, 2oz copper, with 1-inch square copper plate.

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain	$V_{CE}=2\text{V}, I_C=5\text{mA}$	h_{FE}	25	-	-	-
	$V_{CE}=2\text{V}, I_C=500\text{mA}$		25	-	-	
	$V_{CE}=2\text{V}, I_C=150\text{mA}$		63	-	160	
			100	-	250	
Collector Base Cutoff Current	$V_{CB}=30\text{V}$	I_{CBO}	-	-	100	nA
Emitter Base Cutoff Current	$V_{EB}=5\text{V}$	I_{EBO}	-	-	100	nA
Collector Emitter Saturation Voltage	$I_C=500\text{mA}, I_B=50\text{mA}$	$V_{CE(sat)}$	-	-	0.5	V
Base Emitter Voltage	$V_{CE}=2\text{V}, I_C=500\text{mA}$	V_{BE}	-	-	1.0	V
Transition Frequency	$V_{CE}=5\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	f_T	-	130	-	MHz



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RATINGS AND CHARACTERISTIC CURVES

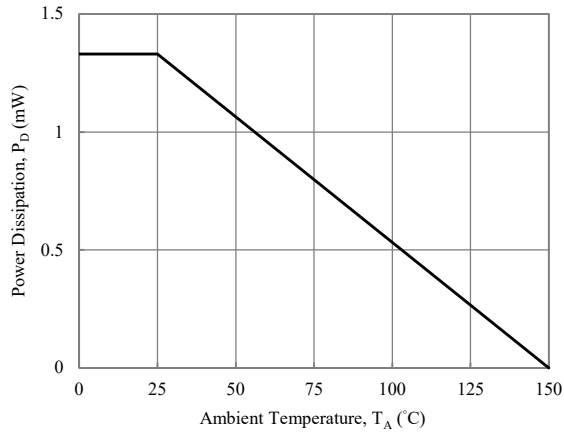


Fig. 1-Power Derating Curves

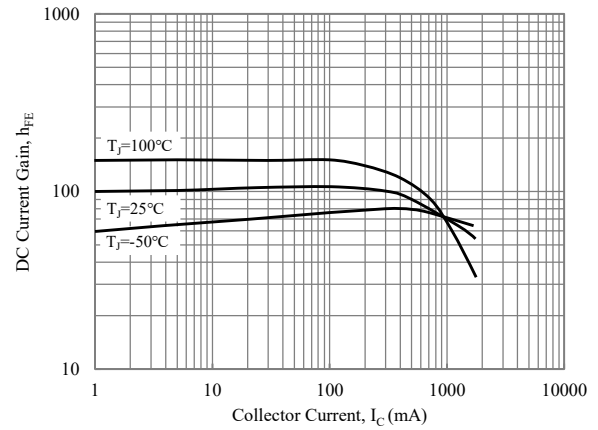


Fig. 2-Current Gain vs. Collector Current

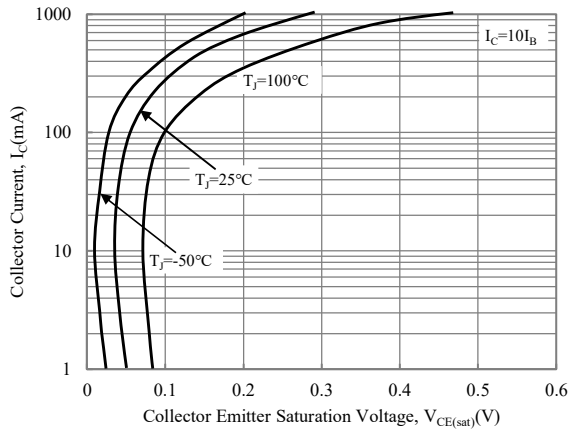


Fig. 3-Collector Emitter Saturation Voltage vs. Collector Current

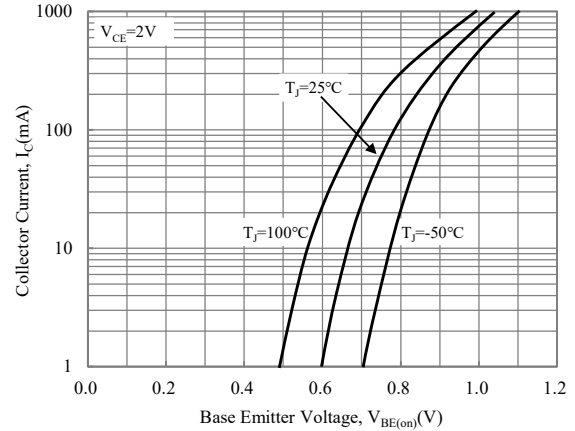


Fig. 4-Base Emitter Voltage vs. Collector Current