

RoHS Compliant Product

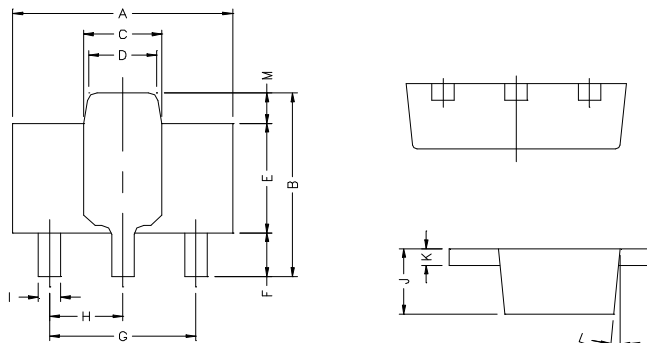
SOT-89

Description

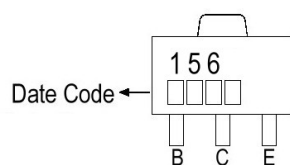
The BCP156 is designed for general purpose switching and amplifier applications.

Features

- * 3 Amp Continuous Current
- * 60 Volt V_{CE0}
- * Low Saturation Voltage



Marking :



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.4	4.6	G	3.00	REF.
B	4.05	4.25	H	1.50	REF.
C	1.50	1.70	I	0.40	0.52
D	1.30	1.50	J	1.40	1.60
E	2.40	2.60	K	0.35	0.41
F	0.89	1.20	L	5° TYP.	
			M	0.70 REF.	

Absolute Maximum Ratings at $T_A=25^{\circ}\text{C}$

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	3	A
	Collector Current (Pulse)	6	
P_D	Total Power Dissipation	1.2	W
T_J, T_{stg}	Junction and Storage Temperature	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS $T_{amb}=25^{\circ}\text{C}$ unless otherwise specified

Parameter	Symbol	Min	Typ.	Max	Unit	Test Conditions
Collector-Base Breakdown Voltage	BV_{CBO}	80	-	-	V	$I_C=100\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage	* BV_{CEO}	60	-	-	V	$I_C=10\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	BV_{EBO}	5	-	-	V	$I_E=100\mu\text{A}, I_C=0$
Collector-Base Cutoff Current	I_{CBO}	-	-	100	nA	$V_{CB}=60\text{V}, I_E=0$
Emitter-Base Cutoff Current	I_{EBO}	-	-	100	nA	$V_{EB}=4\text{V}, I_C=0$
Collector Saturation Voltage	* $V_{CE(sat)1}$	-	0.12	0.3	V	$I_C=1\text{A}, I_B=0.1\text{A}$
	* $V_{CE(sat)2}$	-	0.43	0.6	V	$I_C=3\text{A}, I_B=0.3\text{A}$
Base-Emitter Saturation Voltage	* $V_{BE(sat)}$	-	0.9	1.25	V	$I_C=1\text{A}, I_B=0.1\text{A}$
	* $V_{BE(on)}$	-	0.8	1	V	$I_C=1\text{A}, V_{CE}=2\text{V}$
DC Current Gain	* h_{FE1}	70	200	-		$V_{CE}=2\text{V}, I_C=50\text{mA}$
	* h_{FE2}	100	200	300		$V_{CE}=2\text{V}, I_C=500\text{mA}$
	* h_{FE3}	80	170	-		$V_{CE}=2\text{V}, I_C=1\text{A}$
	* h_{FE4}	40	80	-		$V_{CE}=2\text{V}, I_C=2\text{A}$
Gain-Bandwidth Product	f_T	140	175	-	MHz	$V_{CE}=5\text{V}, I_C=100\text{mA}, f=100\text{MHz}$
Output Capacitance	C_{ob}	-	-	30	pF	$V_{CB}=10\text{V}, f=1\text{MHz}$
Time-On	t_{on}	-	45	-	ns	$V_{CC}=10\text{V}, I_C=500\text{mA}, I_{B1}=I_{B2}=50\text{mA}$
Time-Off	t_{off}	-	800	-		

* Measured under pulse condition. Pulse width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$
Spice parameter data is available upon request for this device.

Characteristics Curve

