

GM156

NPN SILICON PLANAR HIGH PERFORMANCE TRANSISTOR

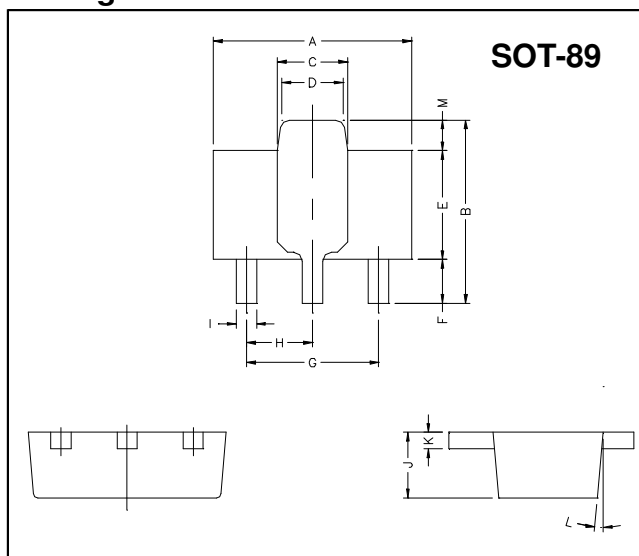
Description

The GM156 is designed for general purpose switching and amplifier applications.

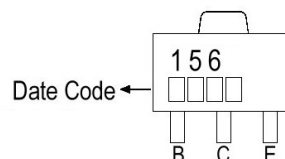
Features

- 60 Volt V_{CE0}
- 3 Amp continuous current
- Low saturation voltage

Package Dimensions



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 $T_a = 25^\circ\text{C}$

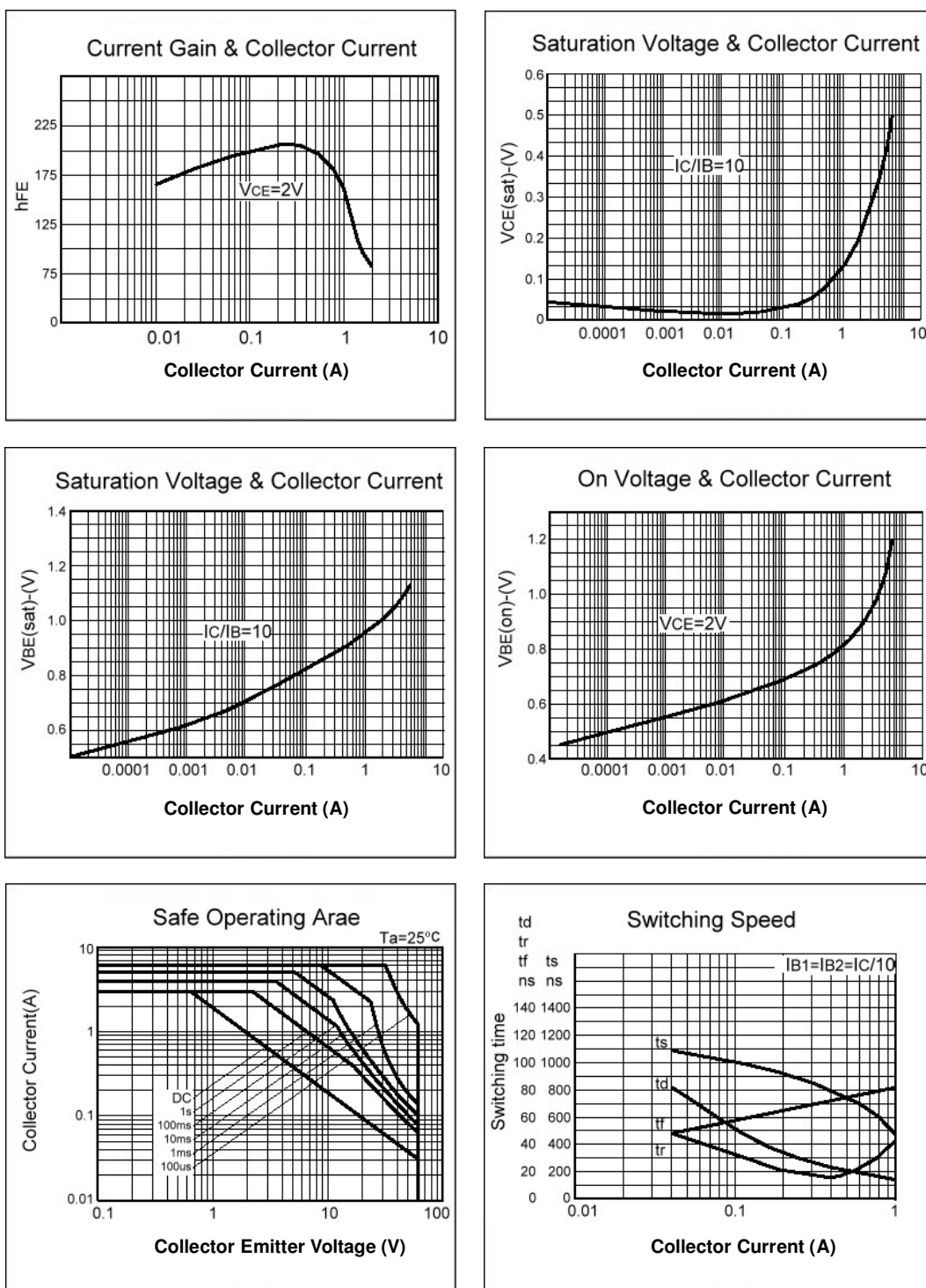
Parameter	Symbol	Ratings	Unit
Junction Temperature	T_j	+150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~+150	$^\circ\text{C}$
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	V_{CEO}	60	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_c	3	A
Collector Current (Pulse)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

Electrical Characteristics ($T_a = 25^\circ\text{C}$, unless otherwise noted)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
V_{CBO}	80	-	-	V	$I_c=100\mu\text{A}$, $I_E=0$
$*V_{CEO}$	60	-	-	V	$I_c=10\text{mA}$, $I_B=0$
V_{EBO}	5	-	-	V	$I_E=100\mu\text{A}$, $I_c=0$
I_{CBO}	-	-	100	nA	$V_{CB}=60\text{V}$, $I_E=0$
I_{EBO}	-	-	100	nA	$V_{EB}=4\text{V}$, $I_c=0$
$*V_{CE(sat)1}$	-	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	$I_c=3\text{A}$, $I_B=0.3\text{A}$
$*V_{BE(sat)}$	-	0.9	1.25	V	$I_c=1\text{A}$, $I_B=0.1\text{A}$
$*V_{BE(on)}$	-	0.8	1.0	V	$I_c=1\text{A}$, $V_{CE}=2\text{V}$
$*h_{FE1}$	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	-		$V_{CE}=2\text{V}$, $I_c=2\text{A}$
f_T	140	175	-	MHz	$V_{CE}=5\text{V}$, $I_c=100\text{mA}$, $f=100\text{MHz}$
C_{ob}	-	-	30	pF	$V_{CB}=10\text{V}$, $f=1\text{MHz}$
t_{on}	-	45	-	ns	$V_{CC}=10\text{V}$, $I_c=500\text{mA}$, $I_{B1}=I_{B2}=50\text{mA}$
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



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