



HM3904

NPN EPITAXIAL PLANAR TRANSISTOR

Description

The HM3904 is designed for general purpose switching and amplifier applications.

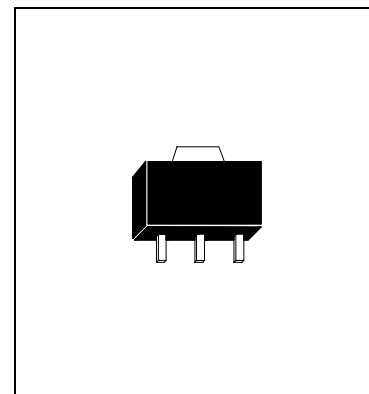
Absolute Maximum Ratings

- Maximum Temperatures
Storage Temperature -55 ~ +150 °C
Junction Temperature +150 °C Maximum
- Maximum Power Dissipation
Total Power Dissipation (Ta=25°C) 1 W
- Maximum Voltages and Currents (Ta=25°C)
VCBO Collector to Base Voltage 60 V
VCES Collector to Emitter Voltage..... 40 V
VEBO Emitter to Base Voltage 6 V
IC Collector Current 200 mA

Characteristics (Ta=25°C)

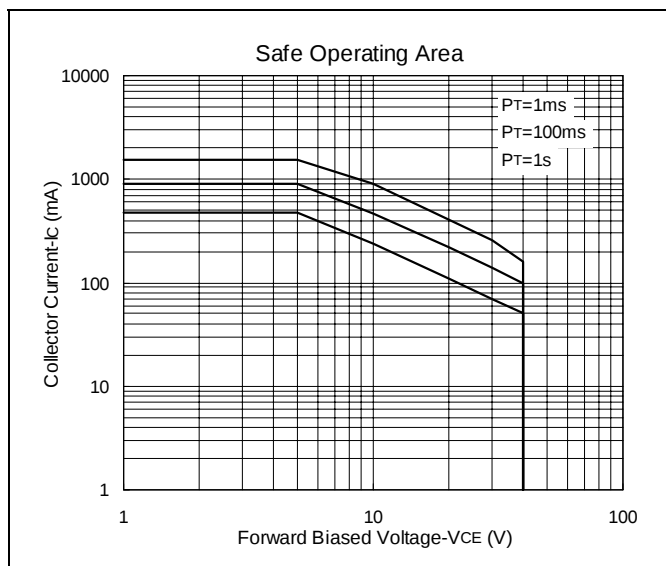
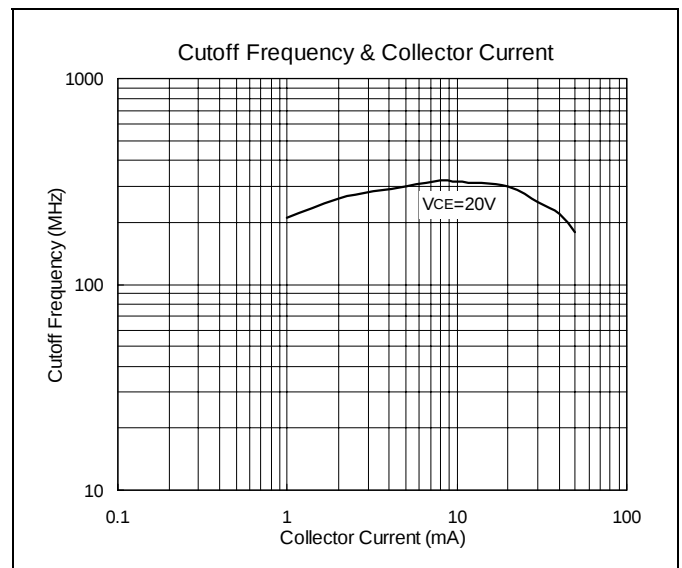
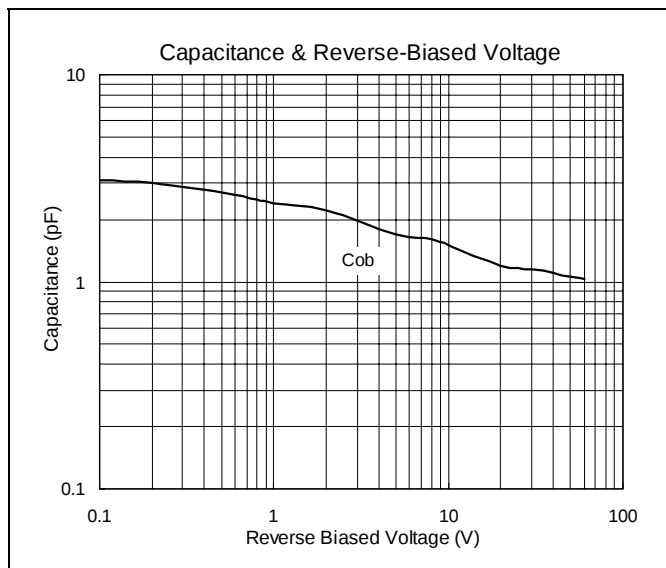
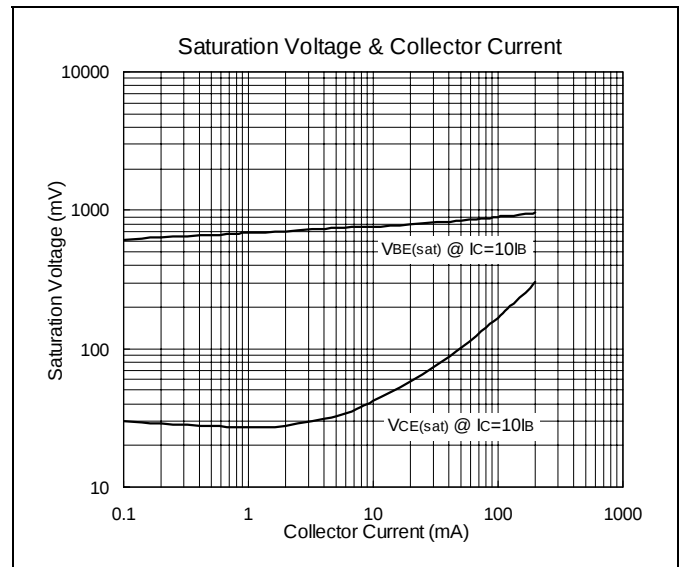
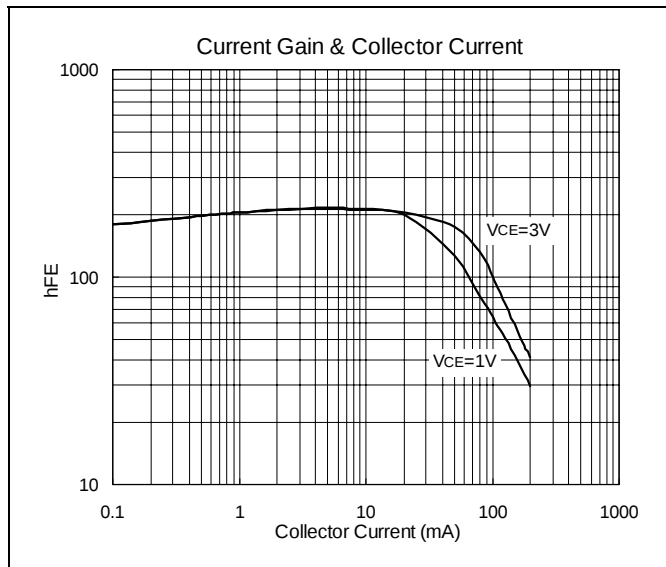
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	60	-	-	V	IC=100uA
BVCEO	40	-	-	V	IC=1mA
BVEBO	6	-	-	V	IE=10uA
ICEX	-	-	50	nA	VCE=30V, VBE=3V
*VCE(sat)1	-	-	200	mV	IC=10mA, IB=1mA
*VCE(sat)2	-	-	300	mV	IC=50mA, IB=5mA
*VBE(sat)1	650	-	850	mV	IC=10mA, IB=1mA
*VBE(sat)2	-	-	950	mV	IC=50mA, IB=5mA
*hFE1	40	-	-		VCE=1V, IC=100uA
*hFE2	70	-	-		VCE=1V, IC=1mA
*hFE3	100	-	300		VCE=1V, IC=10Ma
*hFE4	60	-	-		VCE=1V, IC=50mA
*hFE5	30	-	-		VCE=1V, IC=100mA
fT	300	-	-	MHz	VCE=20V, IC=10mA, f=100MHz
Cob	-	-	4	pF	VCB=5V, f=1MHz

*Pulse Test : Pulse Width ≤380us, Duty Cycle≤2%



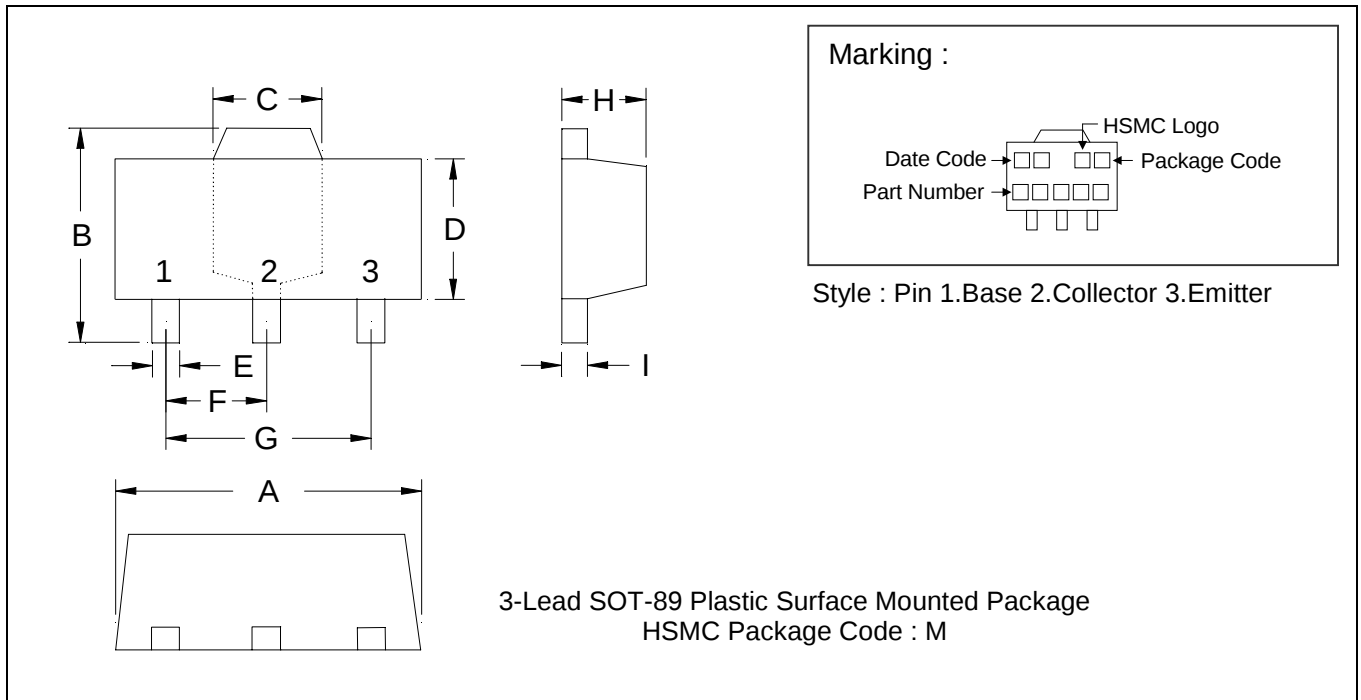


Characteristics Curve





SOT-89 Dimension



*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1732	0.1811	4.40	4.60	F	0.0583	0.0598	1.48	1.52
B	0.1594	0.1673	4.05	4.25	G	0.1165	0.1197	2.96	3.04
C	0.0591	0.0663	1.50	1.70	H	0.0551	0.0630	1.40	1.60
D	0.0945	0.1024	2.40	2.60	I	0.0138	0.0161	0.35	0.41
E	0.0141	0.0201	0.36	0.51					

Notes : 1.Dimension and tolerance based on our Spec. dated May. 05,1996.
2.Controlling dimension : millimeters.
3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

Material :

- Lead : 42 Alloy ; solder plating
- Mold Compound : Epoxy resin family, flammability solid burning class:UL94V-0

Important Notice:

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of HSMC.
- HSMC reserves the right to make changes to its products without notice.
- **HSMC semiconductor products are not warranted to be suitable for use in Life-Support Applications, or systems.**
- HSMC assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.

Head Office And Factory :

- **Head Office** (Hi-Sincerity Microelectronics Corp.) : 10F.,No. 61, Sec. 2, Chung-Shan N. Rd. Taipei Taiwan R.O.C.
Tel : 886-2-25212056 Fax : 886-2-25632712, 25368454
- **Factory 1** : No. 38, Kuang Fu S. Rd., Fu-Kou Hsin-Chu Industrial Park Hsin-Chu Taiwan. R.O.C
Tel : 886-3-5983621~5 Fax : 886-3-5982931
- **Factory 2** : No. 17-1, Ta-Tung Rd., Fu-Kou Hsin-Chu Industrial Park Hsin-Chu Taiwan. R.O.C
Tel : 886-3-5977061 Fax : 886-3-5979220