



HMBT3904

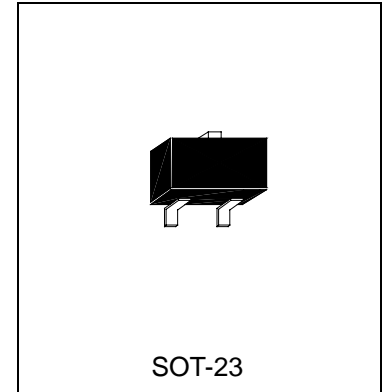
NPN EPITAXIAL PLANAR TRANSISTOR

Description

The HMBT3904 is designed for general purpose switching amplifier applications.

Absolute Maximum Ratings

- Maximum Temperatures
 Storage Temperature -65 ~ +150 °C
 Junction Temperature..... +150 °C
- Maximum Power Dissipation
 Total Power Dissipation (Ta=25°C) 225 mW
- Maximum Voltages and Currents (Ta=25°C)
 VCBO Collector to Base Voltage 60 V
 VCEO Collector to Emitter Voltage..... 40 V
 VEBO Emitter to Base Voltage..... 6 V
 IC Collector Current..... 200 mA



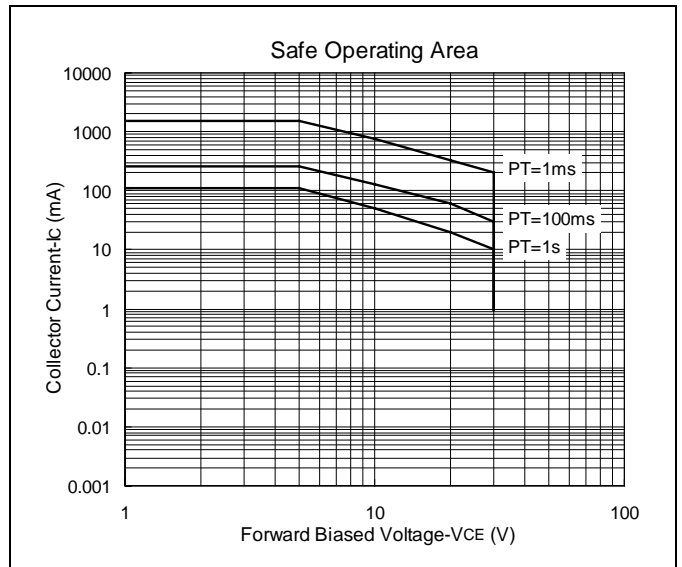
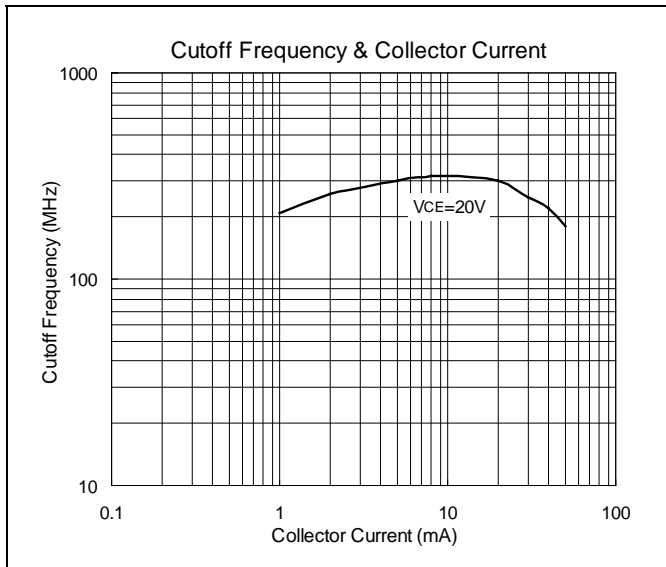
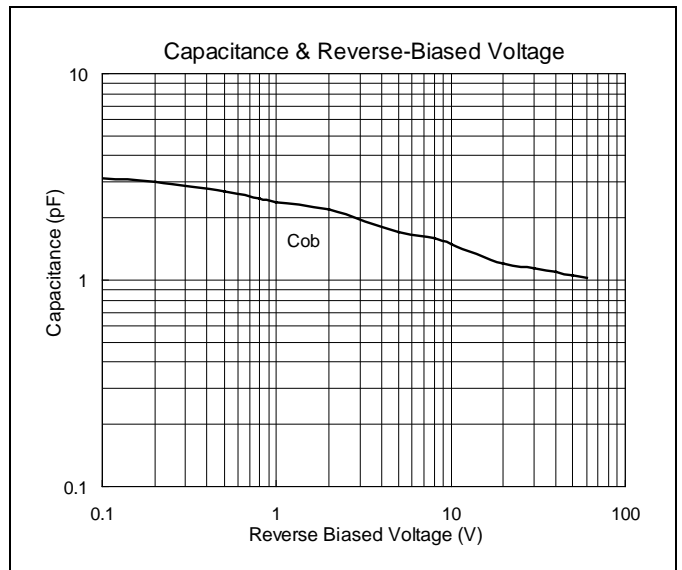
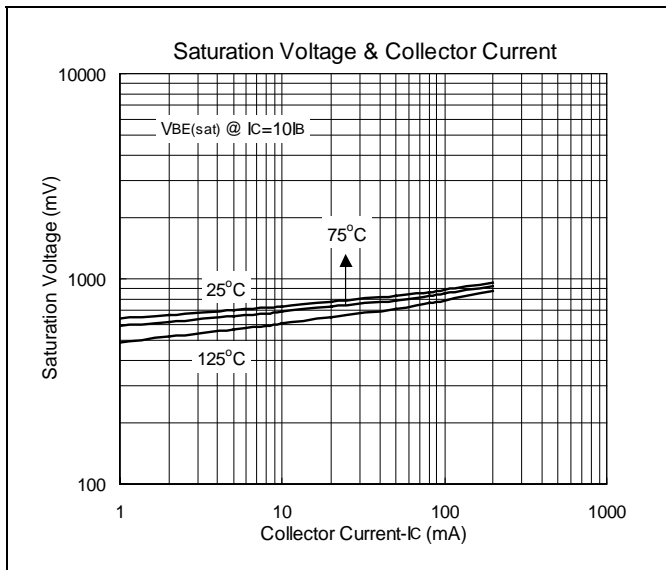
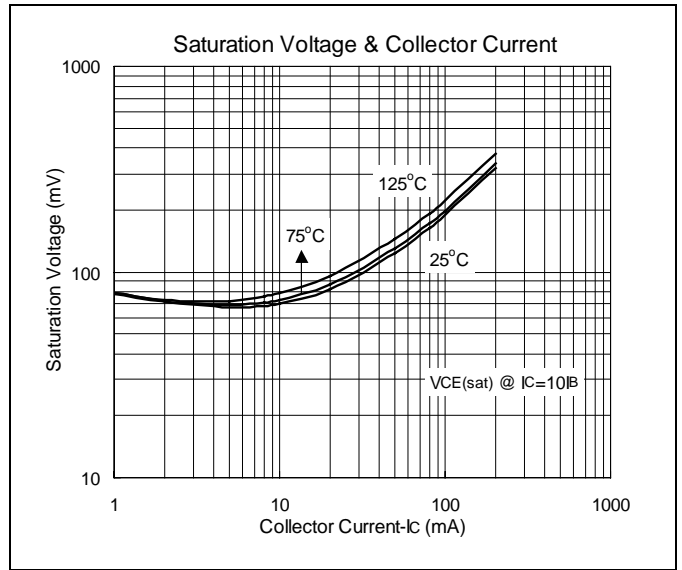
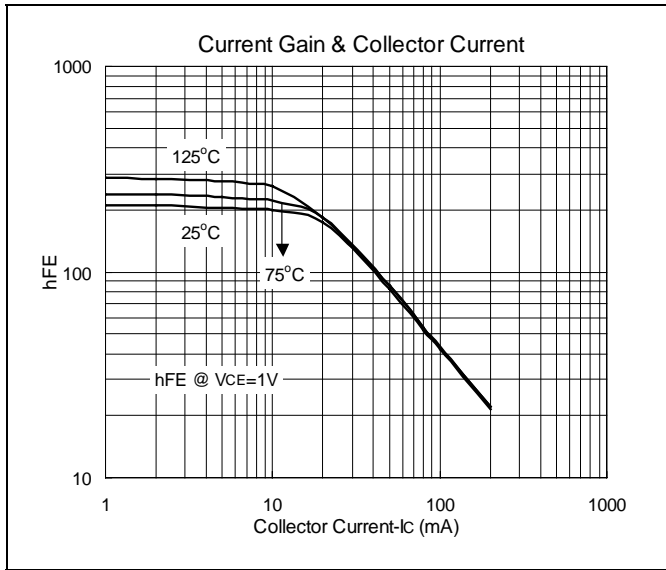
Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	60	-	-	V	IC=10uA
BVCEO	40	-	-	V	IC=1mA
BVEBO	6	-	-	V	IC=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=0.1mA
*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%

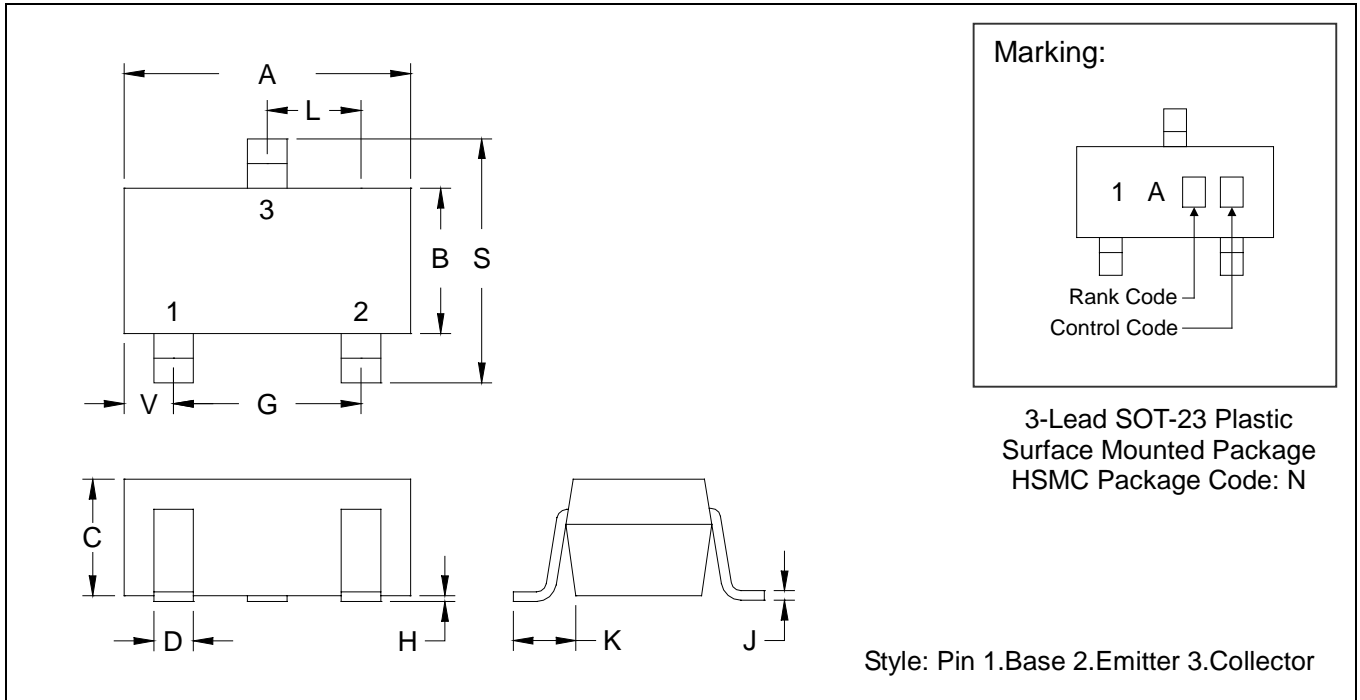


Characteristics Curve





SOT-23 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0034	0.0070	0.085	0.177
B	0.0472	0.0630	1.20	1.60	K	0.0128	0.0266	0.32	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1083	2.10	2.75
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0005	0.0040	0.013	0.10					

- Notes:**
- 1.Dimension and tolerance based on our Spec. dated Sep. 07,1997.
 - 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

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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