

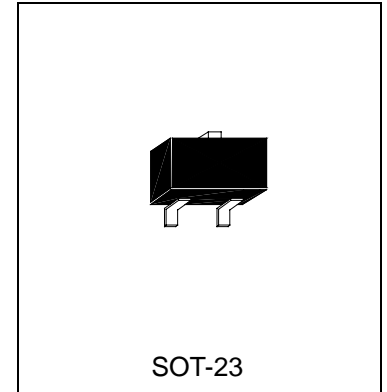


# HMBT8099

NPN EPITAXIAL PLANAR TRANSISTOR

## Description

Amplifier Transistor



## Absolute Maximum Ratings

- Maximum Temperatures  
 Storage Temperature ..... -55 ~ +150 °C  
 Junction Temperature..... +150 °C Maximum
- Maximum Power Dissipation  
 Total Power Dissipation (Ta=25°C) ..... 225 mW
- Maximum Voltages and Currents (Ta=25°C)  
 VCBO Collector to Base Voltage ..... 80 V  
 VCEO Collector to Emitter Voltage..... 80 V  
 VEBO Emitter to Base Voltage ..... 6 V  
 IC Collector Current ..... 500 mA

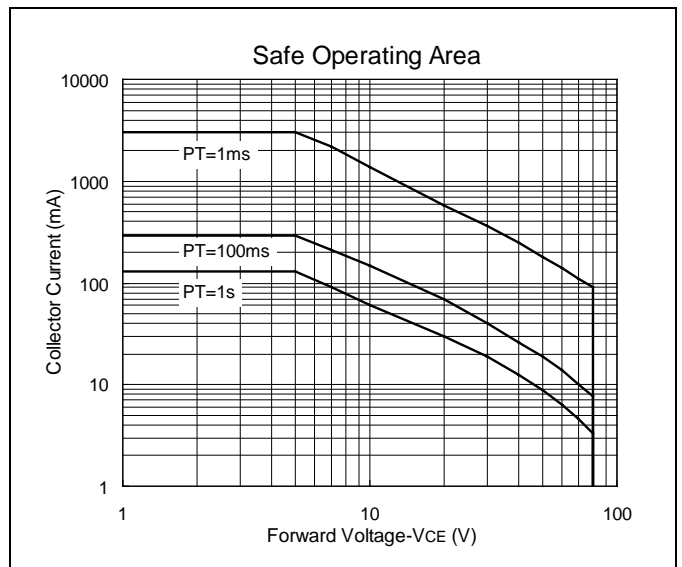
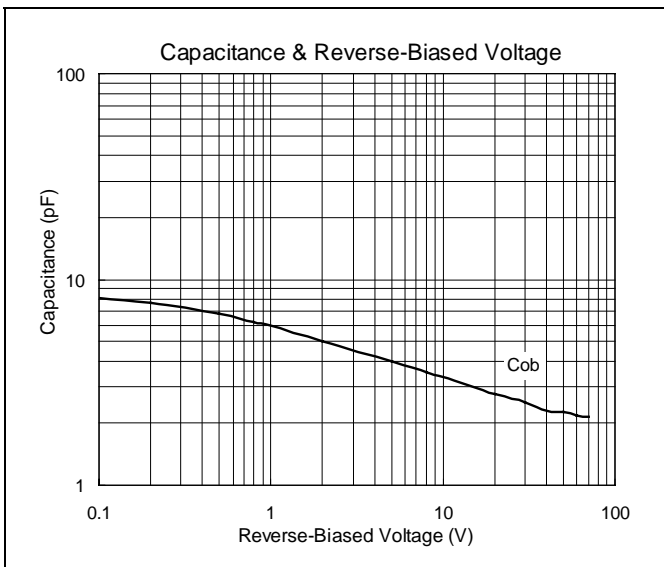
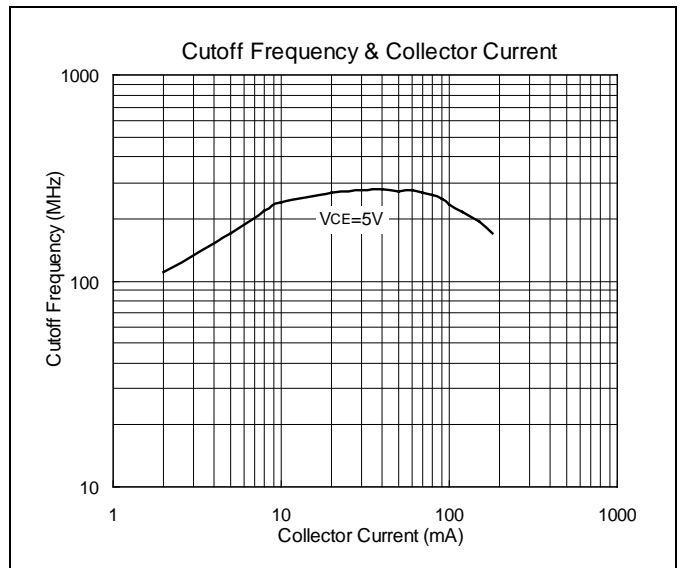
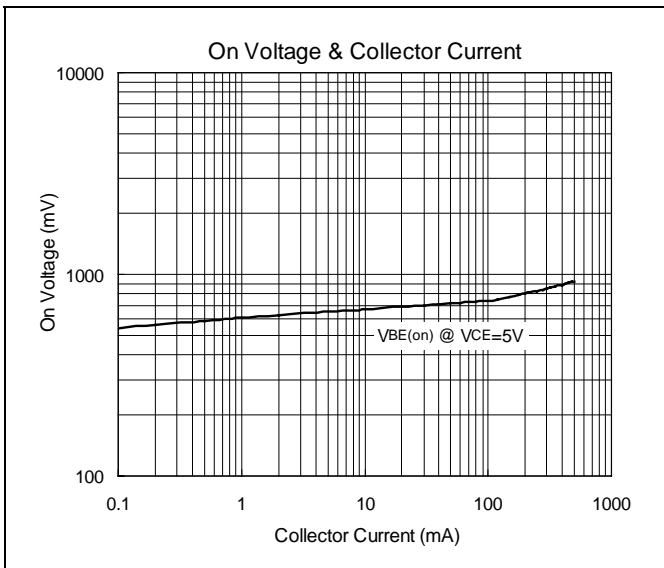
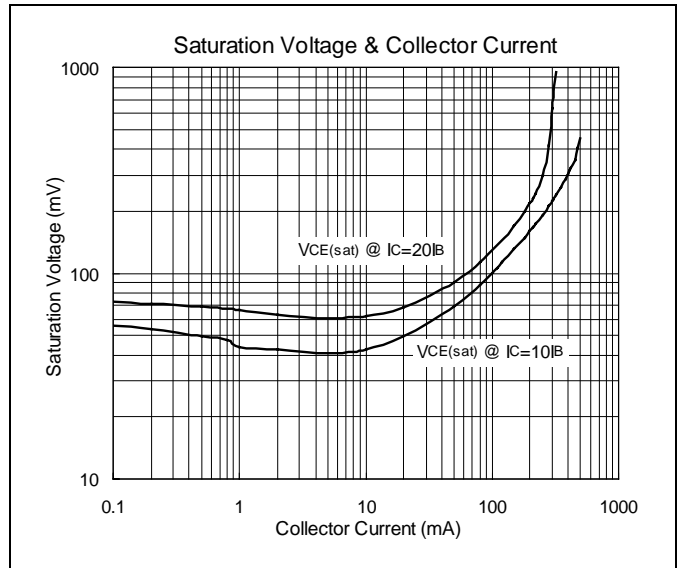
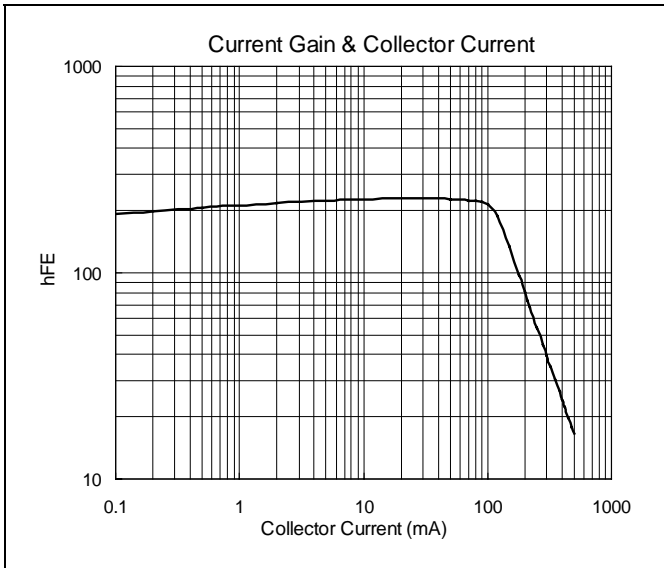
## Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	80	-	-	V	IC=100uA
BVCEO	80	-	-	V	IC=10mA
BVEBO	6	-	-	V	IE=10uA
ICBO	-	-	100	nA	VCB=80V
ICEO	-	-	100	nA	VCE=60V
IEBO	-	-	100	nA	VEB=6V
*VCE(sat)1	-	-	400	mV	IC=100mA, IB=5mA
*VCE(sat)2	-	-	300	mV	IC=100mA, IB=10mA
VBE(on)	600	-	800	mV	VCE=5V, IC=10mA
*hFE1	100	-	300		VCE=5V, IC=1mA
*hFE2	100	-	-		VCE=5V, IC=10mA
*hFE3	75	-	-		VCE=5V, IC=100mA
fT	150	-	-		VCE=5V, IC=10mA
Cob	-	-	6	pF	VCB=5V, f=1MHz, IE=0

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

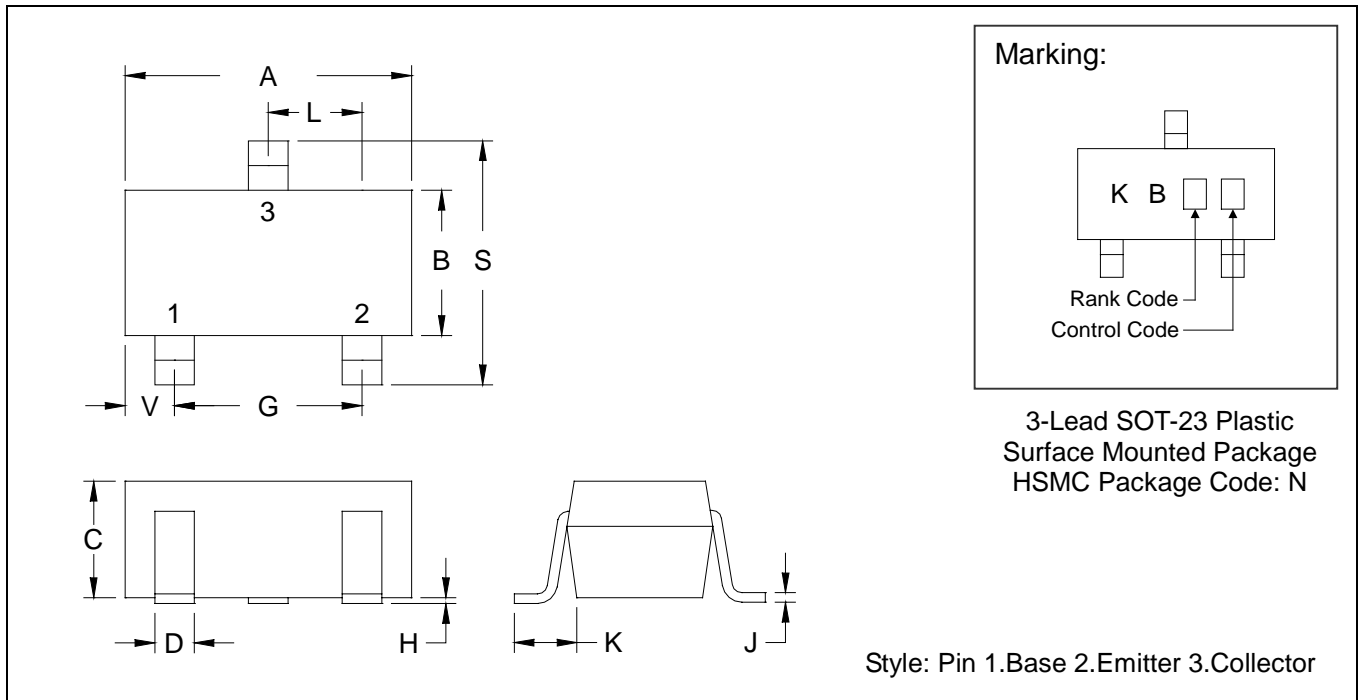


### Characteristics Curve





### 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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