



# HMBT8050

NPN EPITAXIAL TRANSISTOR

## Description

The HMBT8050 is designed for general purpose amplifier applications.

## Features

- High DC Current  $hFE=150-400$  at  $I_C=150mA$
- Complementary to HMBT8550

## Absolute Maximum Ratings

- Maximum Temperatures  
 Storage Temperature ..... -55 ~ +150 °C  
 Junction Temperature..... +150 °C Maximum
- Maximum Power Dissipation  
 Total Power Dissipation ( $T_a=25^\circ C$ ) ..... 225 mW
- Maximum Voltages and Currents ( $T_a=25^\circ C$ )  
 VCBO Collector to Base Voltage ..... 25 V  
 VCEO Collector to Emitter Voltage..... 20 V  
 VEBO Emitter to Base Voltage..... 5 V  
 IC Collector Current ..... 700 mA

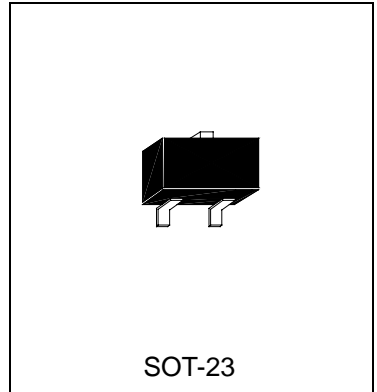
## Characteristics ( $T_a=25^\circ C$ )

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	25	-	-	V	$I_C=10\mu A, I_E=0$
BVCEO	20	-	-	V	$I_C=1mA, I_B=0$
BVEBO	5	-	-	V	$I_E=10\mu A, I_C=0$
ICBO	-	-	1	$\mu A$	$V_{CB}=20V, I_E=0$
*VCE(sat)	-	-	500	mV	$I_C=500mA, I_B=50mA$
VBE(on)	-	-	1	V	$V_{CE}=1V, I_C=150mA$
*hFE	150	-	500		$V_{CE}=1V, I_C=150mA$
fT	150	-	-	MHz	$V_{CE}=10V, I_C=20mA, f=100MHz$
Cob	-	-	10	pF	$V_{CB}=10V, f=1MHz$

\*Pulse Test: Pulse Width  $\leq 380\mu s$ , Duty Cycle  $\leq 2\%$

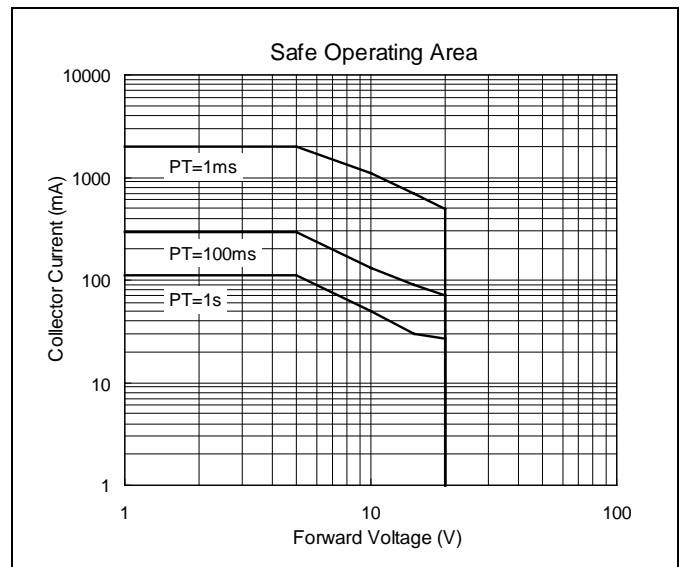
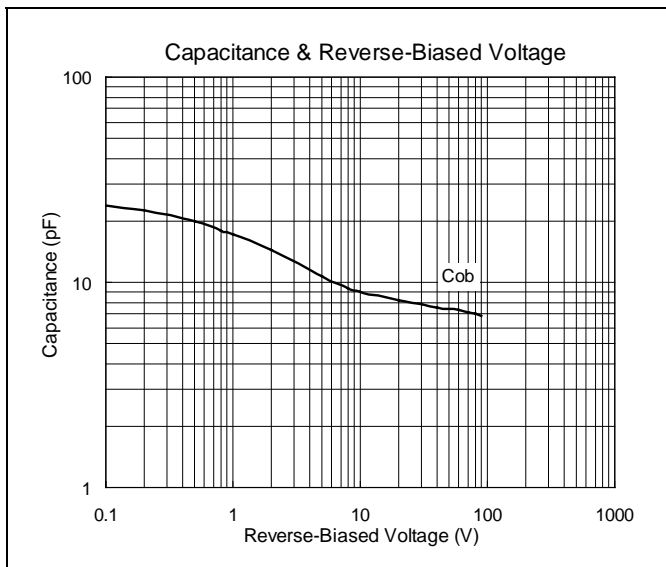
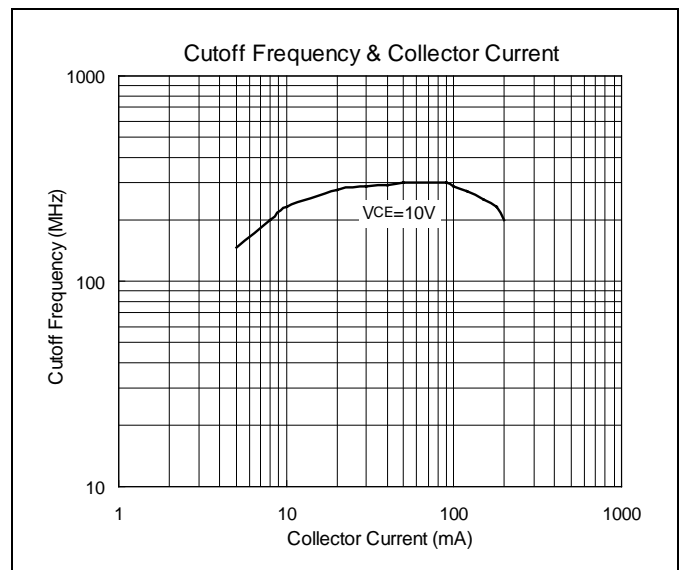
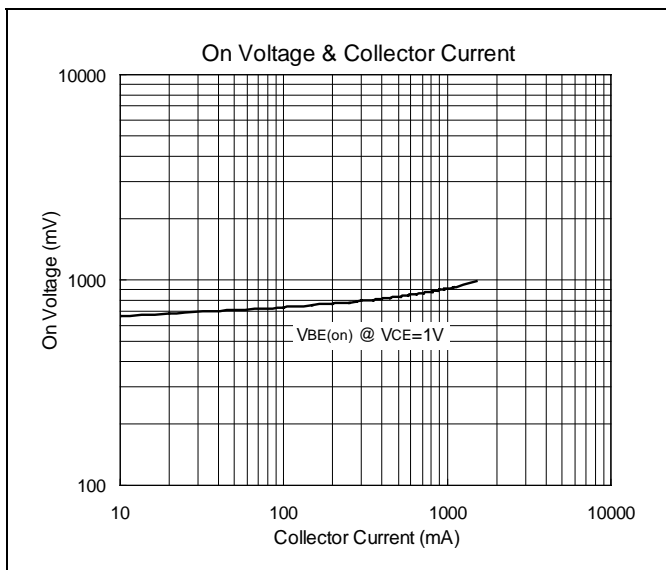
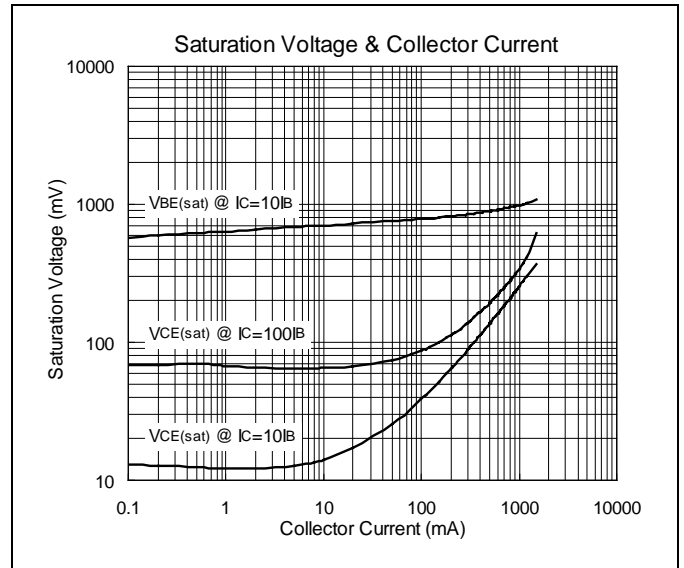
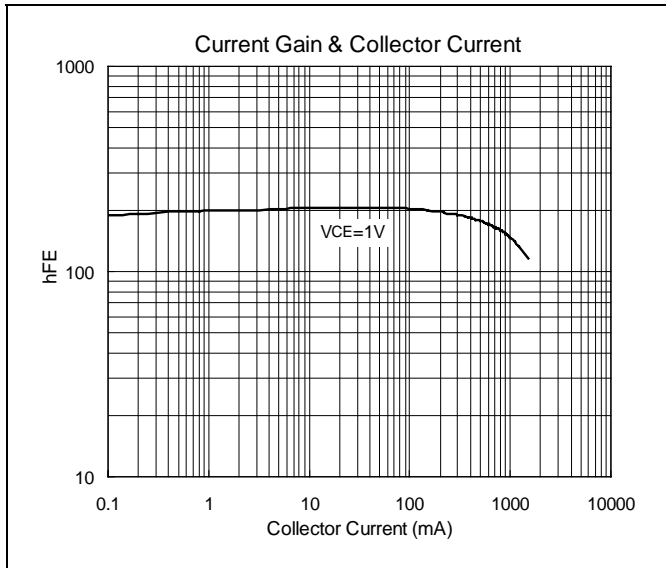
## Classification Of hFE

Rank	D9D	D9E
Range	150-300	250-500



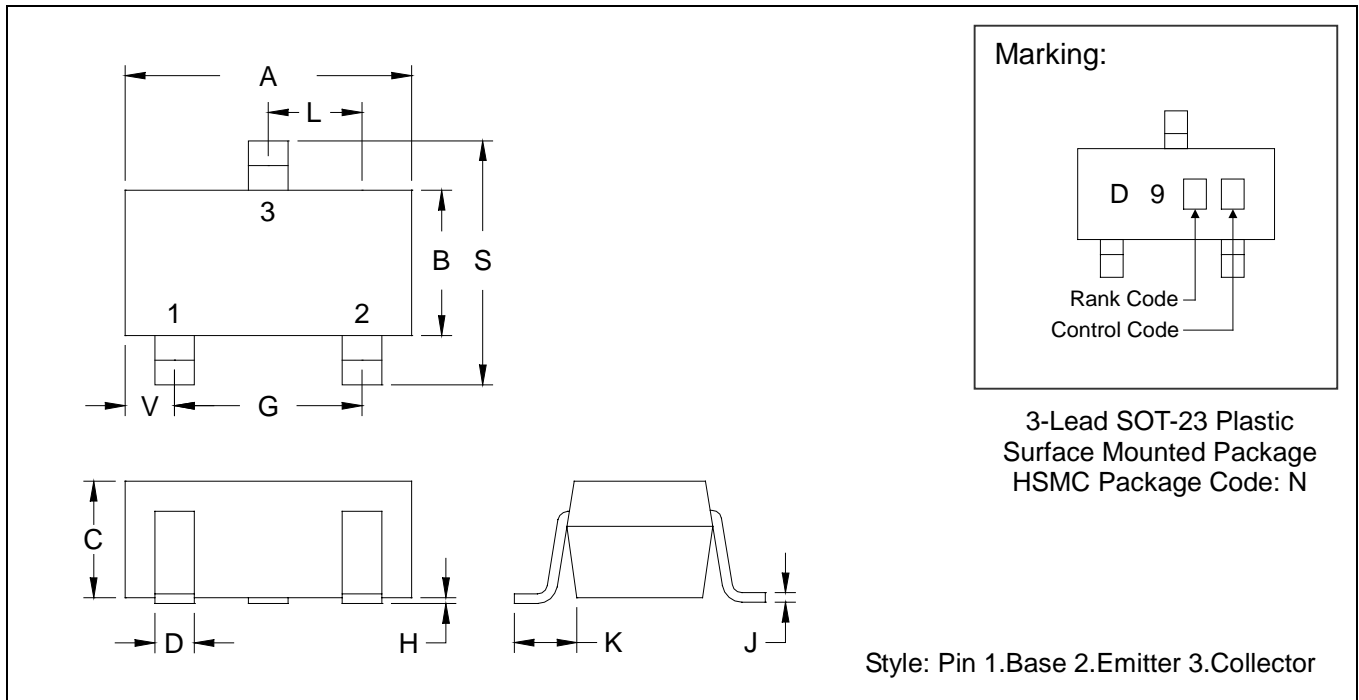


### Characteristics Curve





### 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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