



# HSB1109

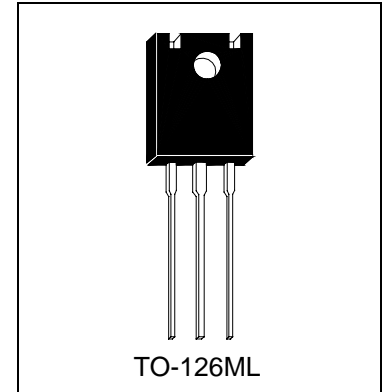
PNP EPITAXIAL PLANAR TRANSISTOR

## Features

- Low frequency high voltage amplifier
- Complementary pair with HSD1609

## Absolute Maximum Ratings (Ta=25°C)

- Maximum Temperatures  
Storage Temperature ..... -50 ~ +150 °C  
Junction Temperature ..... +150 °C Maximum
- Maximum Power Dissipation  
Total Power Dissipation (Ta=25°C) ..... 1.25 W
- Maximum Voltages and Currents  
BVCBO Collector to Base Voltage ..... -160 V  
BVCEO Collector to Emitter Voltage ..... -160 V  
BVEBO Emitter to Base Voltage ..... -5 V  
IC Collector Current ..... -100 mA



## Electrical Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	-160	-	-	V	IC=-10uA
BVCEO	-160	-	-	V	IC=-1mA
BVEBO	-5	-	-	V	IE=-10uA
ICBO	-	-	-10	uA	VCB=-140V
*VCE(sat)	-	-	-2	V	IC=-30mA, IB=-3mA
VBE(on)	-	-	-1.5	V	IC=-10mA, VCE=-5V
*hFE1	60	-	320		IC=-10mA, VCE=-5V
*hFE2	30	-	-		IC=-1mA, VCE=-5V
fT	-	140	-	MHz	IC=-10mA, VCE=-5V
Cob	-	5.5	-	pF	VCB=-10V, f=1MHz

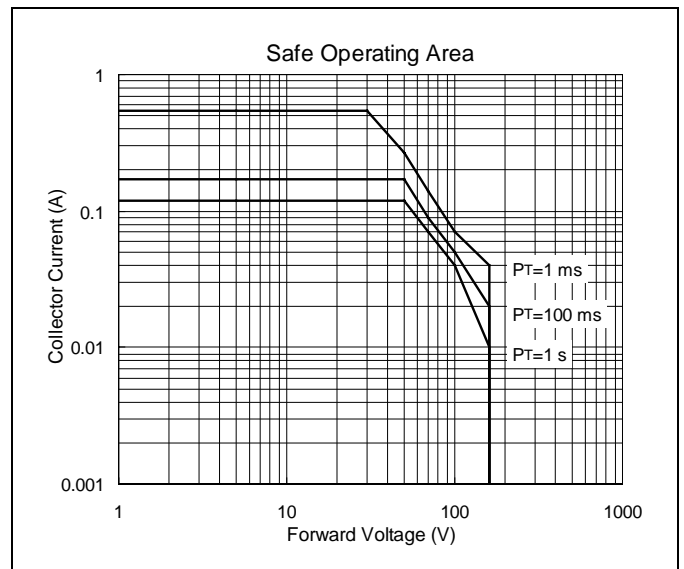
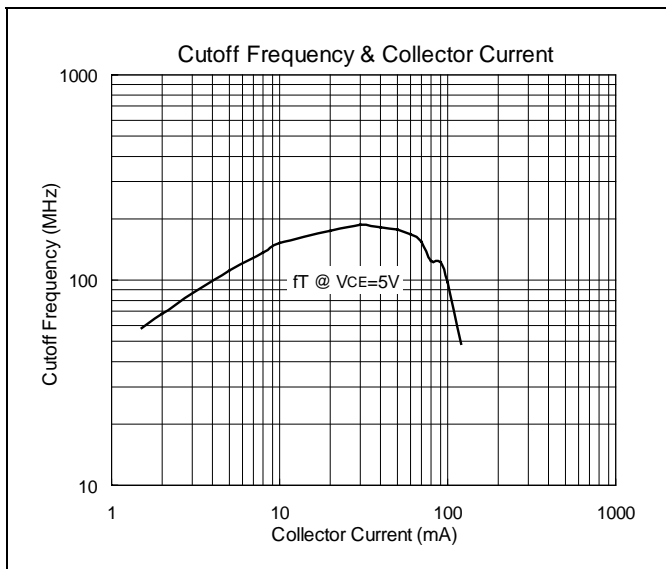
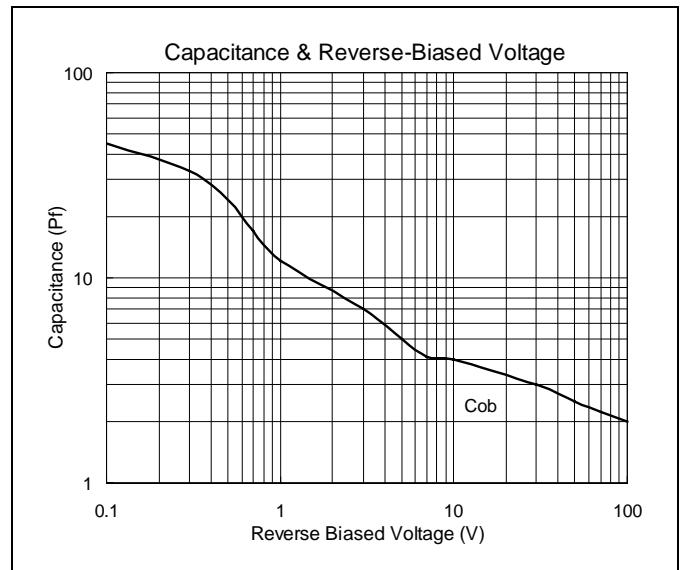
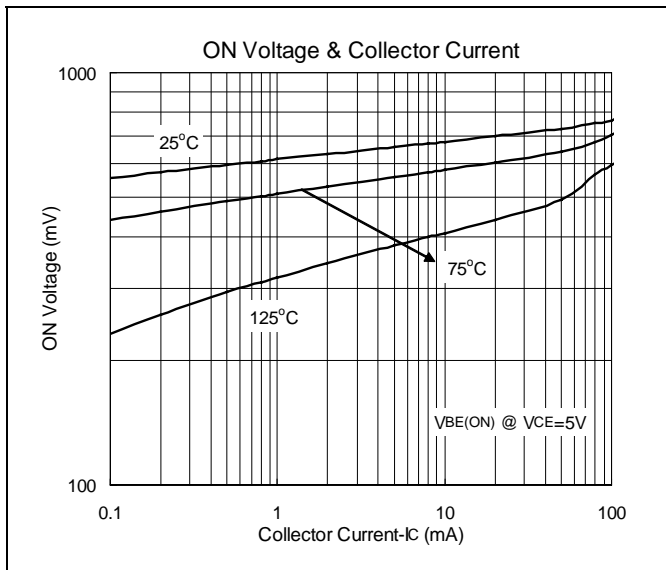
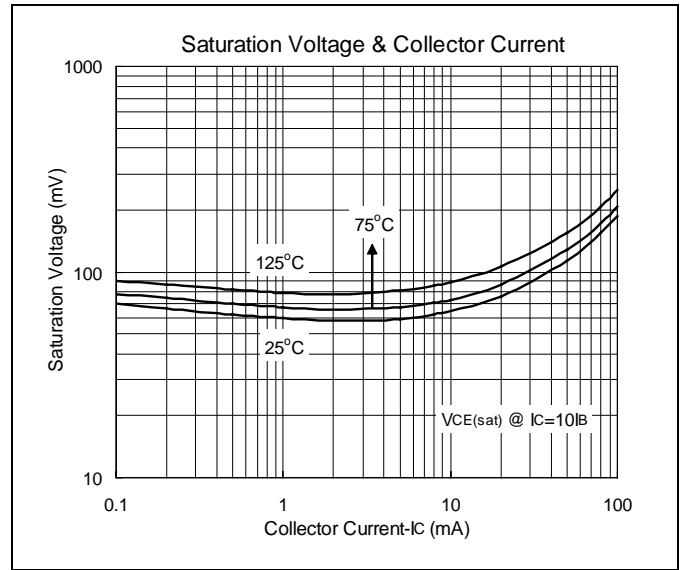
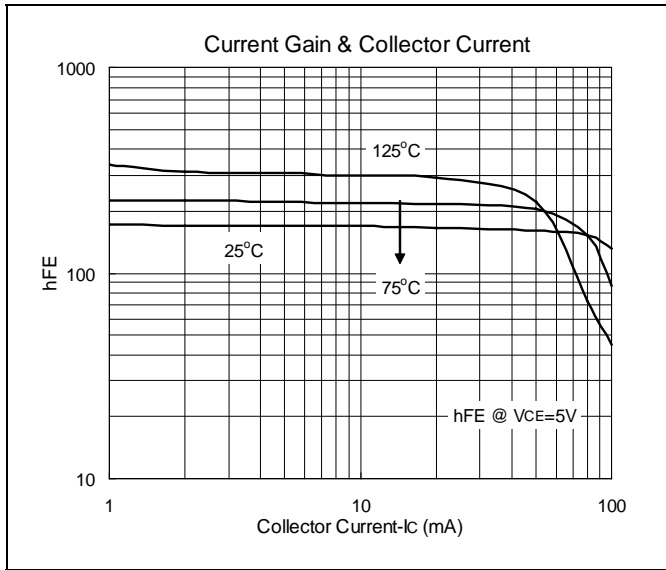
\*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

## Classification Of hFE1

Rank	B	C	D
Range	60-120	100-200	160-320

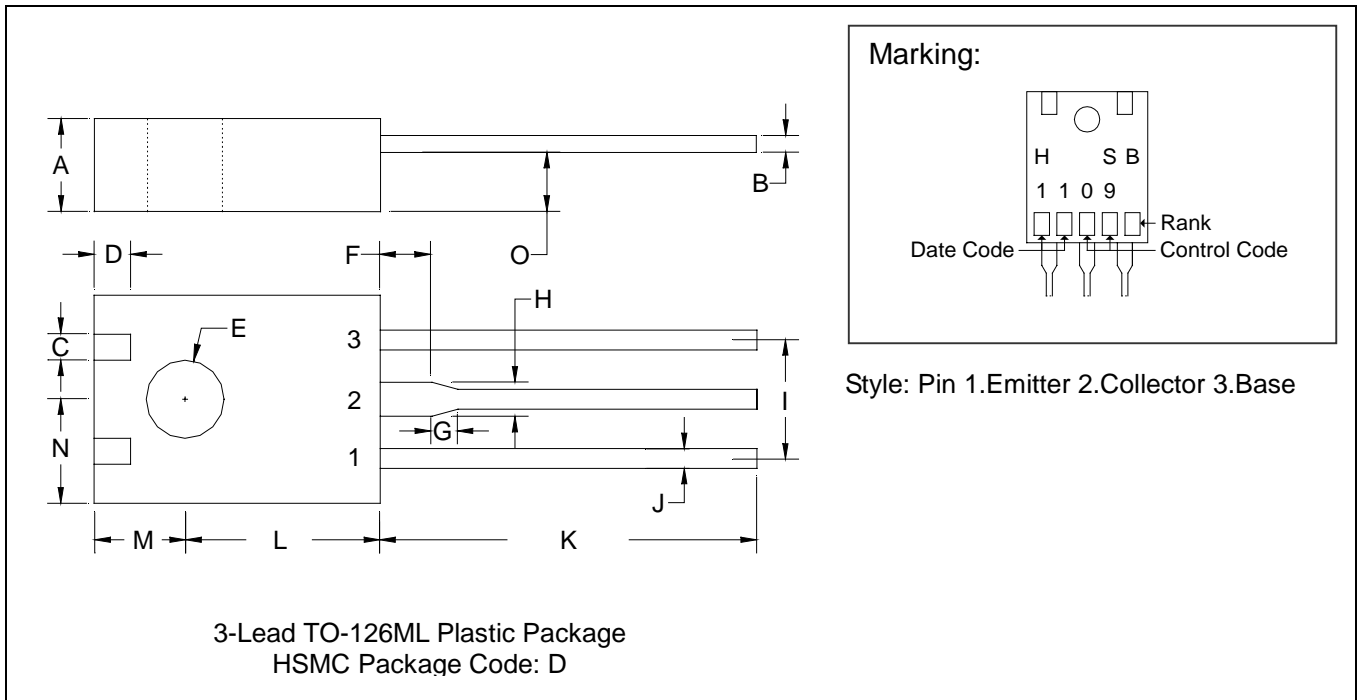


### Characteristics Curve





### TO-126ML Dimension



\*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1356	0.1457	3.44	3.70	I	-	*0.1795	-	*4.56
B	0.0170	0.0272	0.43	0.69	J	0.0268	0.0331	0.68	0.84
C	0.0344	0.0444	0.87	1.12	K	0.5512	0.5906	14.00	15.00
D	0.0501	0.0601	1.27	1.52	L	0.2903	0.3003	7.37	7.62
E	0.1131	0.1231	2.87	3.12	M	0.1378	0.1478	3.50	3.75
F	0.0737	0.0837	1.87	2.12	N	0.1525	0.1625	3.87	4.12
G	0.0294	0.0494	0.74	1.25	O	0.0740	0.0842	1.88	2.14
H	0.0462	0.0562	1.17	1.42					

Notes: 1.Dimension and tolerance based on our Spec. dated Mar. 6,1995.  
 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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