



# HBD678

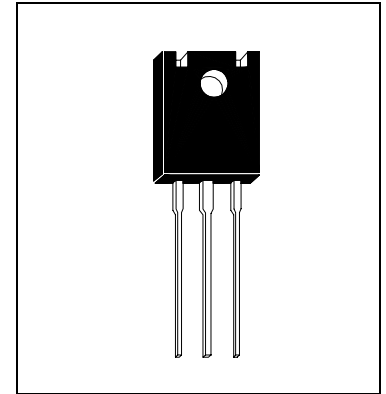
NPN EPITAXIAL PLANAR TRANSISTOR

## Description

The HBD678 is designed for use as output devices in complementary general purpose amplifier applications.

## Features

- High Current Gain
- Monolithic Constructor



## Absolute Maximum Ratings (Ta=25°C)

- Maximum Temperatures  
 Storage Temperature ..... -50 ~ +150 °C  
 Junction Temperature ..... +150 °C Maximum
- Maximum Power Dissipation  
 Total Power Dissipation (Tc=25°C) ..... 40 W
- Maximum Voltages and Currents  
 BVCBO Collector to Base Voltage ..... 60 V  
 BVCEO Collector to Emitter Voltage ..... 60 V  
 BVEBO Emitter to Base Voltage ..... 5 V  
 IC Collector Current ..... 4 A  
 IB Base Current ..... 1 A

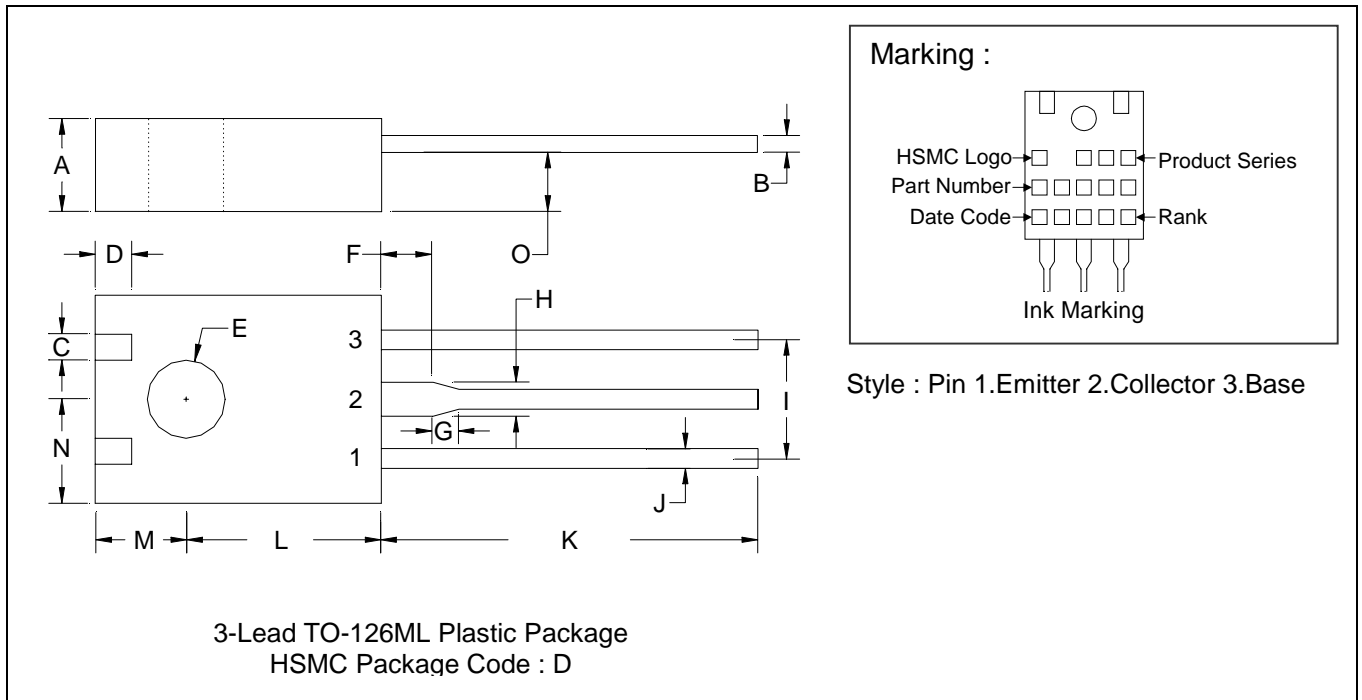
## Electrical Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	60	-	-	V	IC=1mA
BVCEO	60	-	-	V	IC=50mA
BVEBO	5	-	-	V	IE=1mA
ICEO	-	-	200	uA	VCB=30V
ICBO	-	-	200	uA	VCB=60V
IEBO	-	-	2	mA	VBE=5V
*VCE(sat)	-	-	2.5	V	IC=1.5A, IB=30mA
*VBE(on)	-	-	2.5	V	IC=1.5A, VCE=3V
*hFE	750	-	-		IC=1.5A, VCE=3V

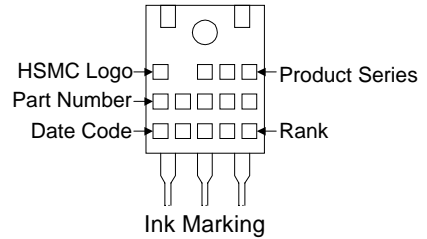
\*Pulse Test : Pulse Width ≤380us, Duty Cycle≤2%



## TO-126ML Dimension



Marking :



Style : Pin 1. Emitter 2. Collector 3. Base

\*: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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