

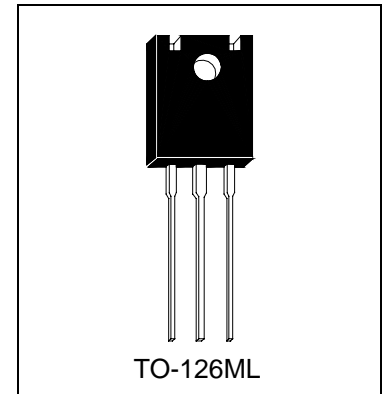


# HSD669A

NPN EPITAXIAL PLANAR TRANSISTOR

## Description

Low frequency power amplifier complementary pair with HSB649A



## Absolute Maximum Ratings (Ta=25°C)

- Maximum Temperatures
  - Storage Temperature ..... -55 ~ +150 °C
  - Junction Temperature ..... +150 °C Maximum
- Maximum Power Dissipation
  - Total Power Dissipation (Ta=25°C) ..... 1 W
  - Total Power Dissipation (Tc=25°C) ..... 20 W
- Maximum Voltages and Currents
  - BVCBO Collector to Base Voltage ..... 180 V
  - BVCEO Collector to Emitter Voltage ..... 160 V
  - BVEBO Emitter to Base Voltage ..... 5 V
  - IC Collector Current (DC) ..... 1.5 A
  - IC Collector Current (Pulse) ..... 3 A

## Electrical Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	180	-	-	V	IC=1mA, IE=0
BVCEO	160	-	-	V	IC=10mA, IB=0
BVEBO	5	-	-	V	IE=1mA, IC=0
ICBO	-	-	10	uA	VCB=160V, IE=0
*VCE(sat)	-	-	1	V	IC=500mA, IB=50mA
VBE(on)	-	-	1.5	V	IC=150mA, VCE=5V
*hFE1	100	-	320		IC=150mA, VCE=5V
*hFE2	30	-	-		IC=500mA, VCE=5V
fT	-	140	-	MHz	IC=150mA, VCE=5V
Cob	-	14	-	pF	VCB=10V, f=1MHz, IE=0

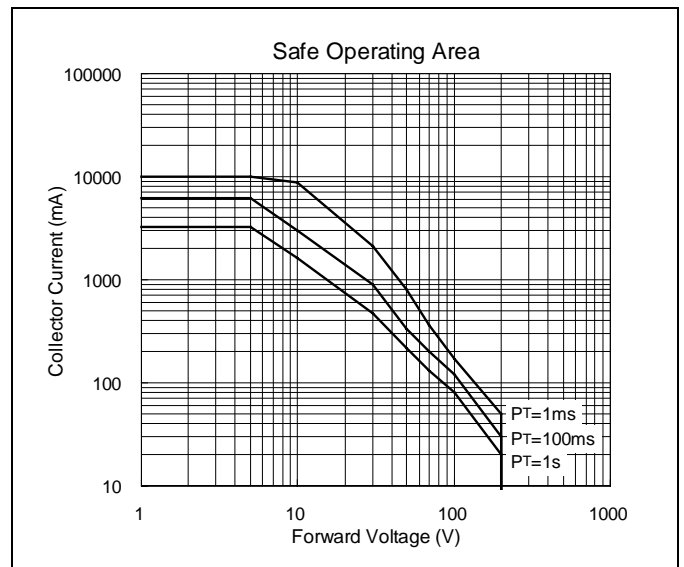
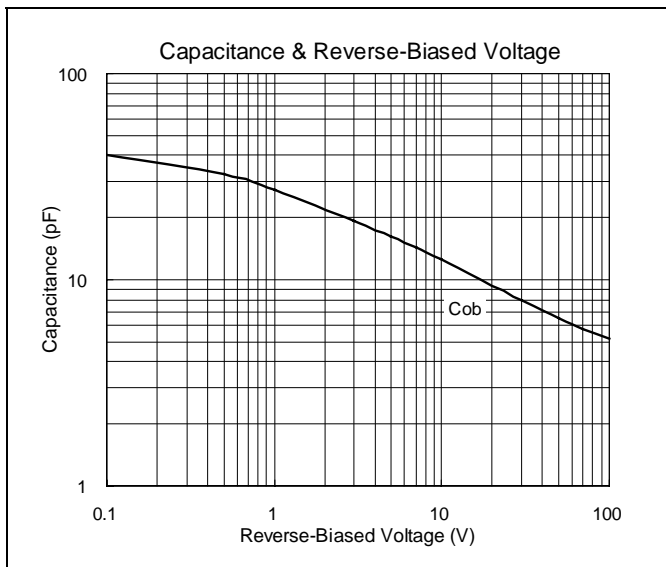
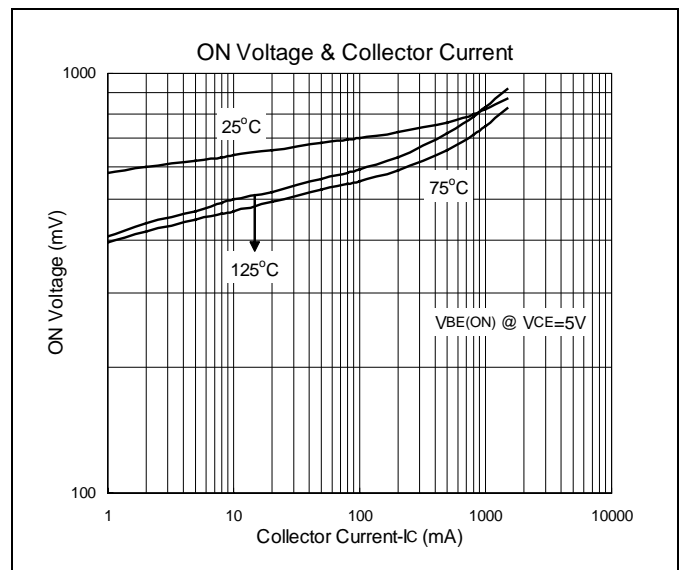
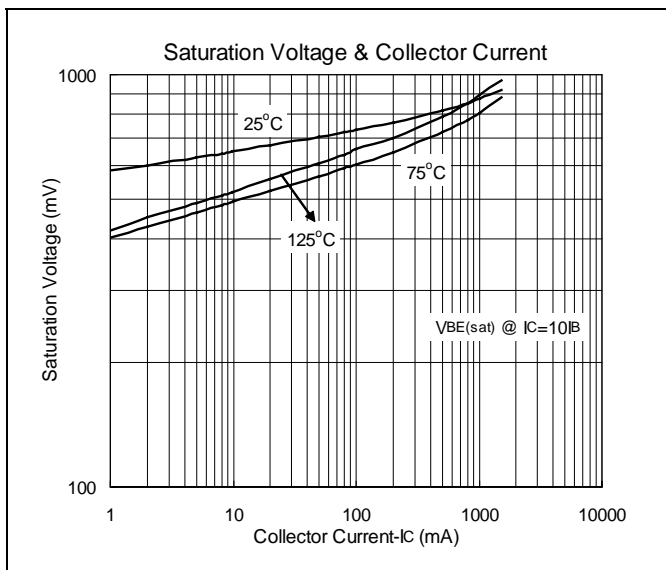
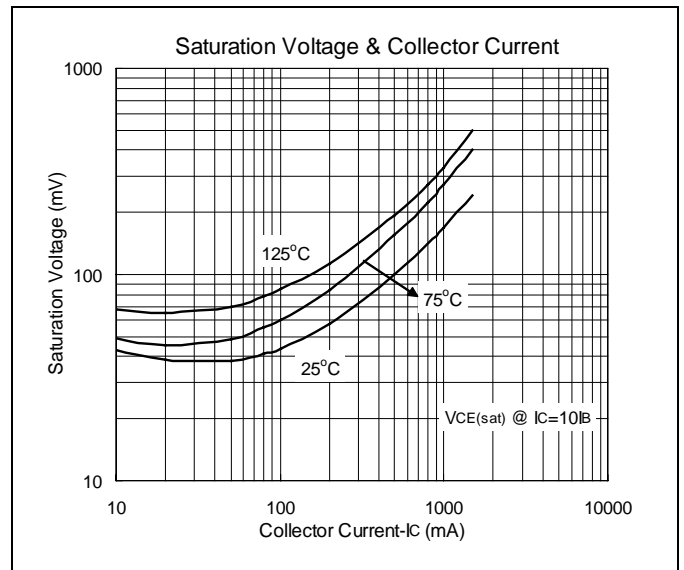
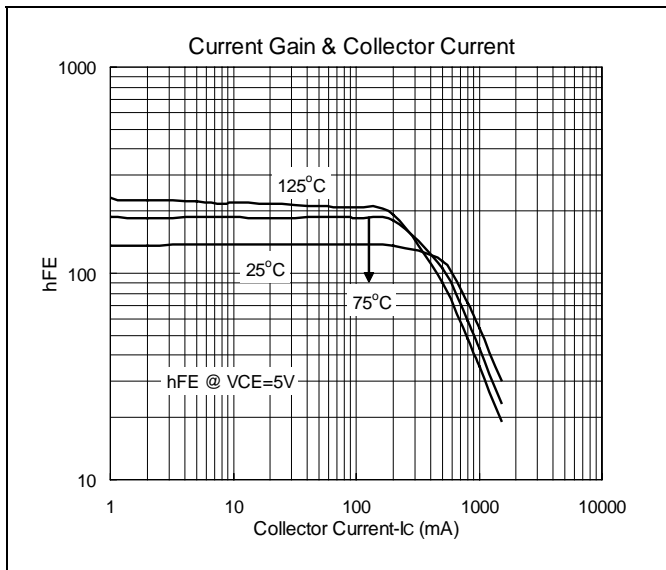
\*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

## Classification Of hFE1

Rank	C	D
Range	100-200	180-320

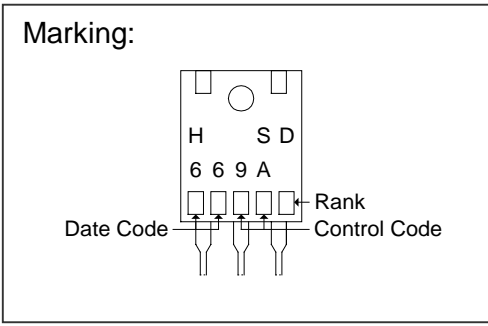
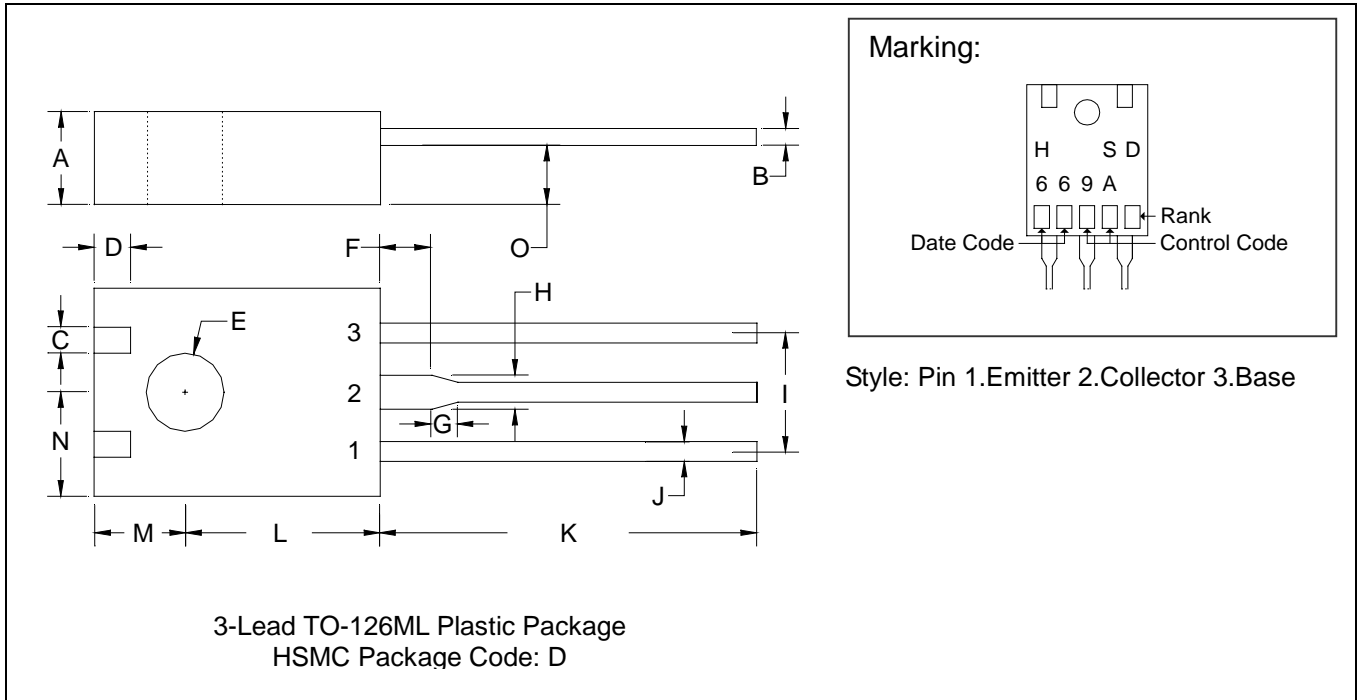


### Characteristics Curve





### TO-126ML Dimension



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: L94V-0

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