

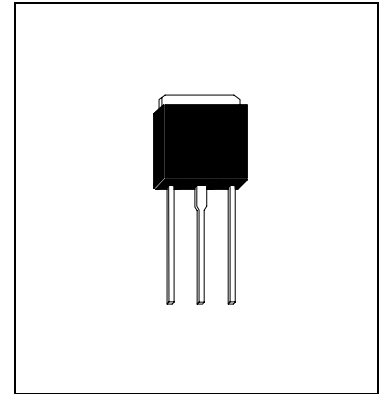


# HI1609

NPN EPITAXIAL PLANAR TRANSISTOR

## Description

- Low frequency high voltage amplifier
- Complementary pair with HI1109



## Absolute Maximum Ratings (Ta=25°C)

- Maximum Temperatures  
 Storage Temperature ..... -55 ~ +150 °C  
 Junction Temperature ..... +150 °C
- Maximum Power Dissipation  
 Total Power Dissipation (Tc=25°C) ..... 20 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 (DC) ..... 100 mA

## Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	160	-	-	V	IC=10uA, IE=0
BVCEO	160	-	-	V	IC=1mA, IB=0
BVEBO	5	-	-	V	IE=10uA, IC=0
ICBO	-	-	10	uA	VCB=140V, IE=0
*VCE(sat)	-	-	2	V	IC=30mA, IB=3mA
VBE(on)	-	-	1.5	V	IC=10mA, VCE=5V
*hFE1	60	-	320		VCE=5V, IC=10mA
*hFE2	30	-	-		VCE=5V, IC=1mA
fT	-	140	-	MHz	VCE=5V, IC=10mA
Cob	-	3.8	-	pF	VCB=10V, f=1MHz

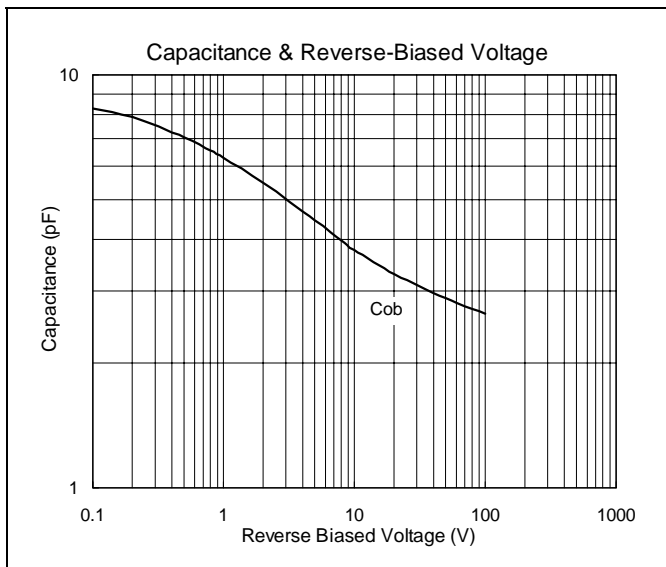
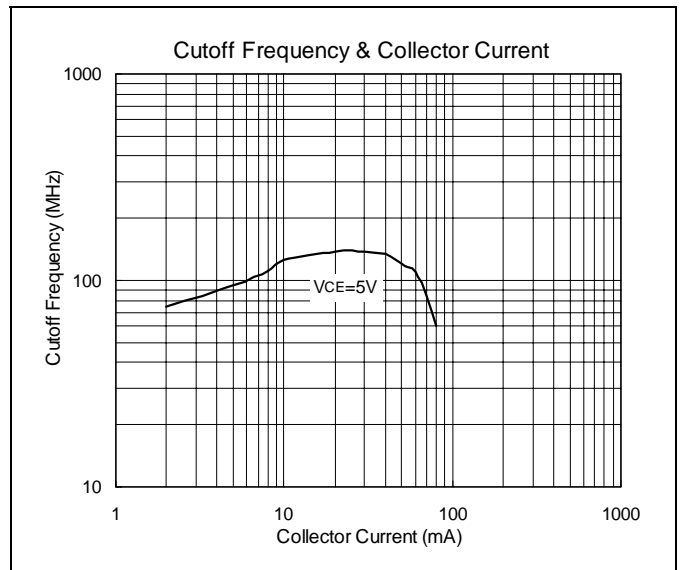
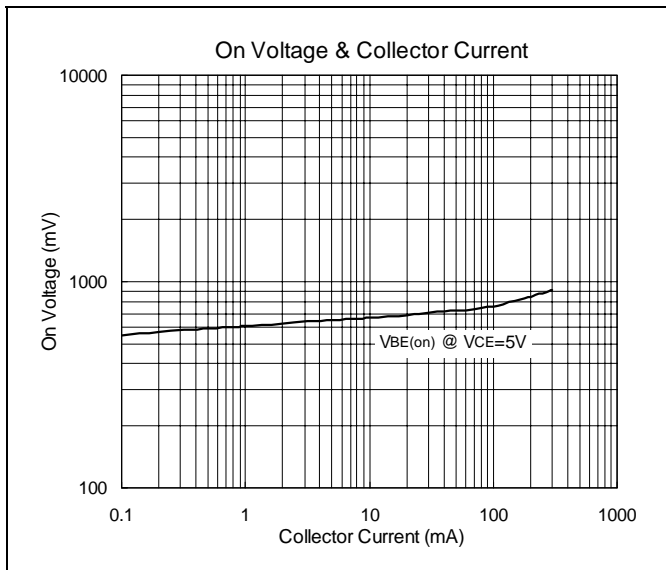
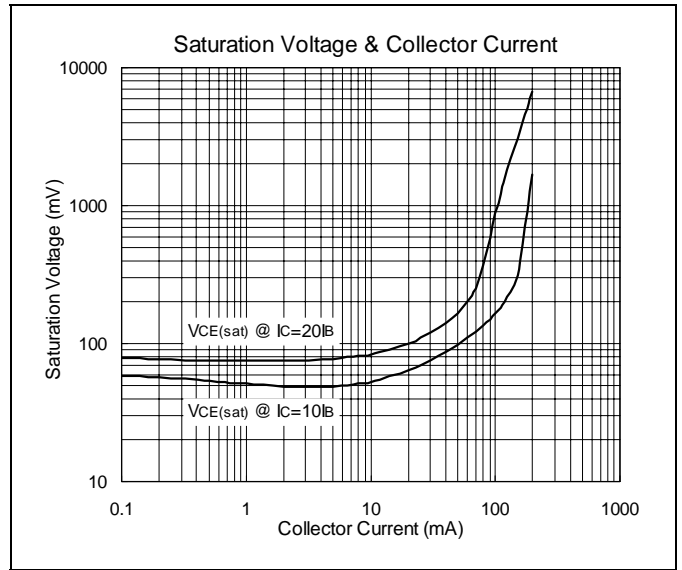
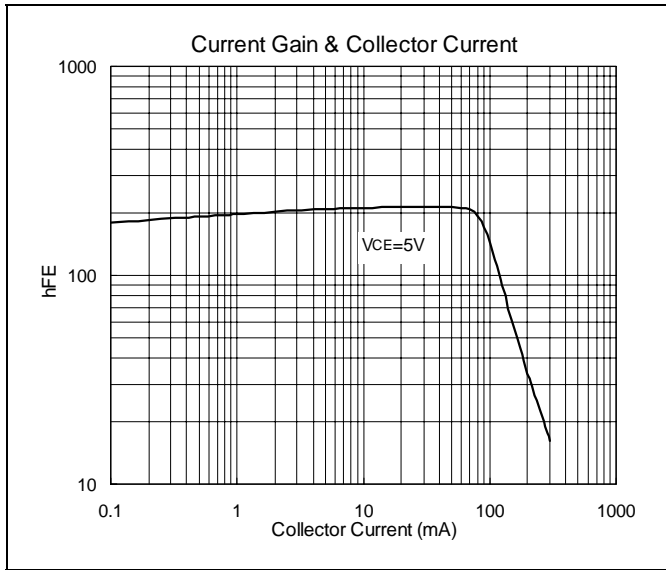
\*Pulse Test : Pulse Width ≤380us, Duty Cycle≤2%

## Classification Of hFE1

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

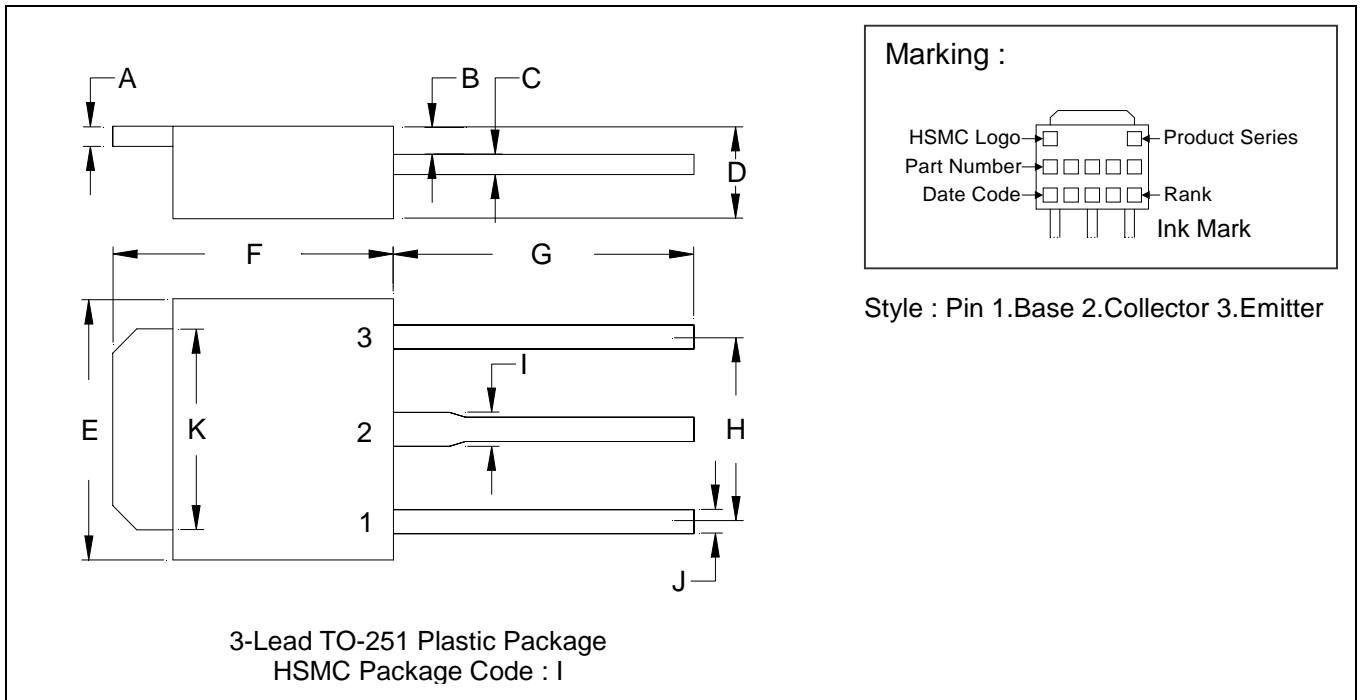


### Characteristics Curve





### TO-251 Dimension



\*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.0177	0.0217	0.45	0.55	G	0.2559	-	6.50	-
B	0.0354	0.0591	0.90	1.50	H	-	*0.1811	-	*4.60
C	0.0177	0.0236	0.45	0.60	I	-	0.0354	-	0.90
D	0.0866	0.0945	2.20	2.40	J	-	0.0315	-	0.80
E	0.2520	0.2677	6.40	6.80	K	0.2047	0.2165	5.20	5.50
F	0.2677	0.2835	6.80	7.20					

**Notes :** 1.Dimension and tolerance based on our Spec. dated May. 24,1995.  
 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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