

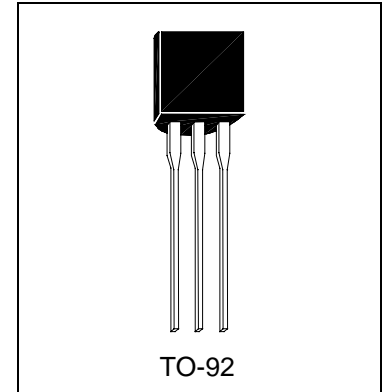


HSD1609S

NPN EPITAXIAL PLANAR TRANSISTOR

Description

The HSD1609S is designed for low frequency high voltage amplifier applications, complementary pair with HSB1109S.



Absolute Maximum Ratings

- Maximum Temperatures
 Storage Temperature -50 ~ +150 °C
 Junction Temperature 150 °C Maximum
- Maximum Power Dissipation
 Total Power Dissipation (Ta=25°C) 900 mW
- Maximum Voltages and Currents (Ta=25°C)
 VCBO Collector to Base Voltage 160 V
 VCEO Collector to Emitter Voltage 160 V
 VEBO Emitter to Base Voltage 5 V
 IC Collector Current 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	VCE=5V, IC=10mA
*hFE1	60	-	320		VCE=5V, IC=10mA
*hFE2	30	-	-		VCE=5V, IC=1mA
fT	-	140	-	MHz	VCE=5V, IC=10mA
Cob	-	3.8	-	pF	IE=0, VCB=10V, f=1MHZ

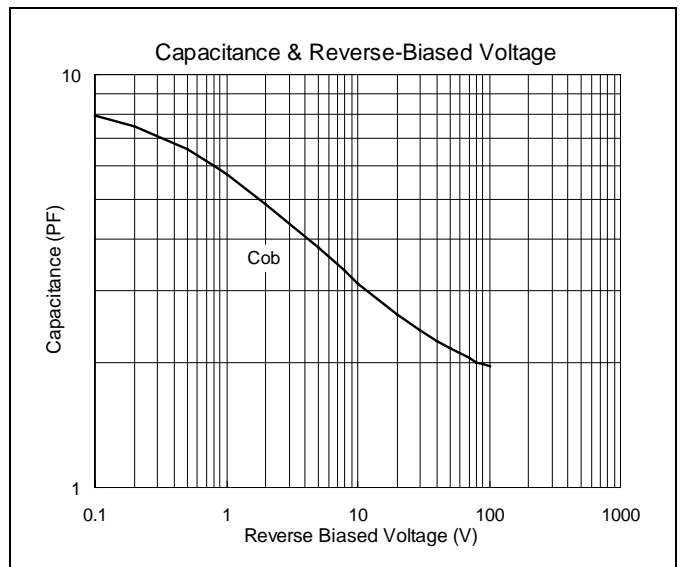
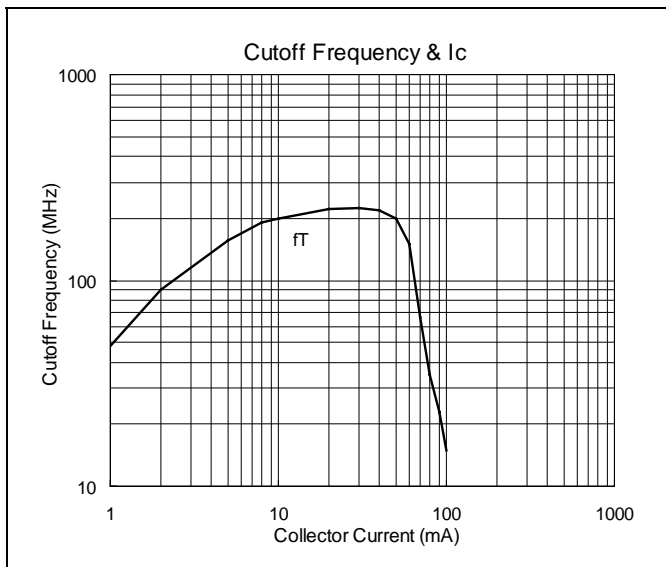
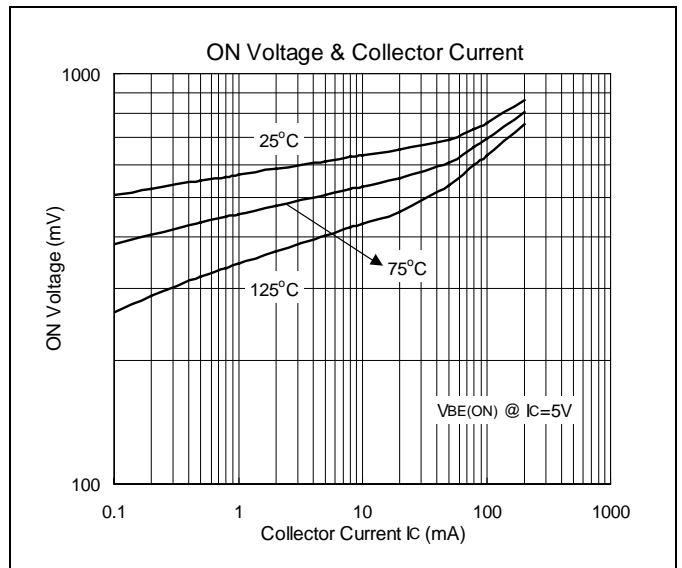
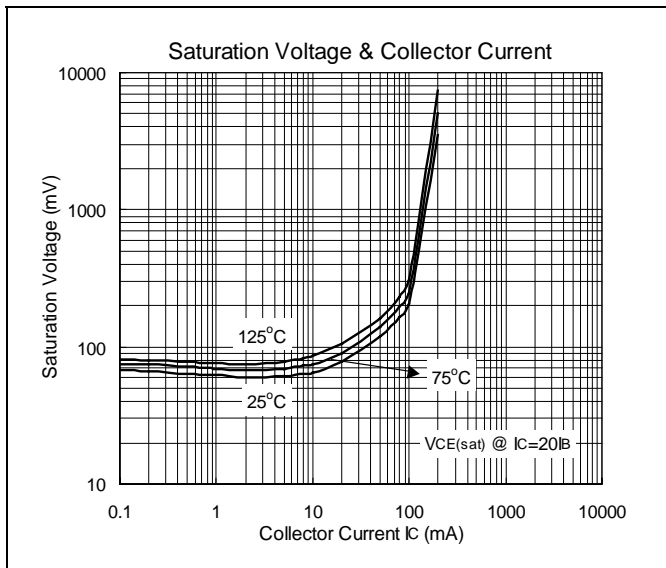
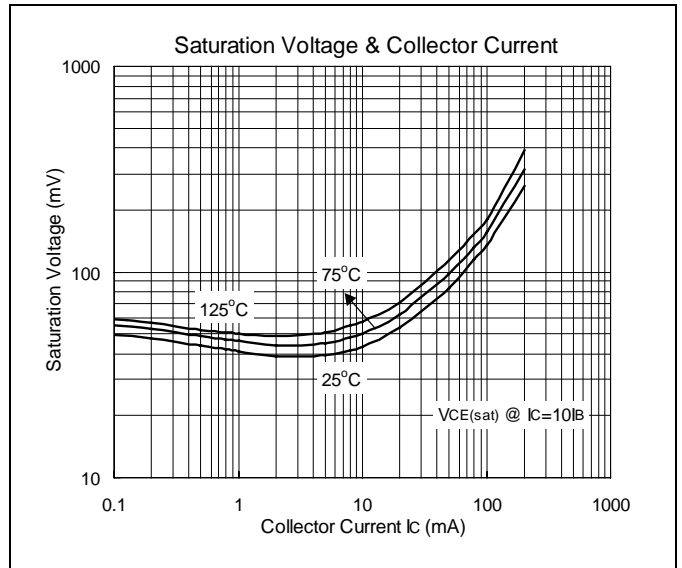
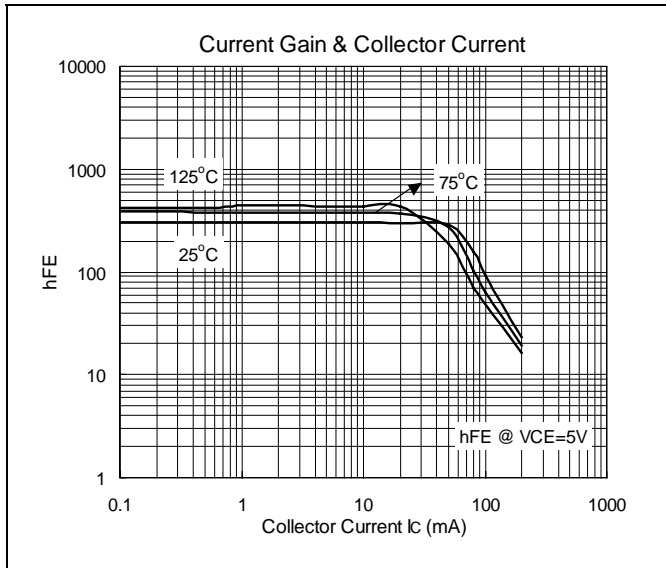
*Pulse Test : Pulse Width ≤380us, Duty Cycle≤2%

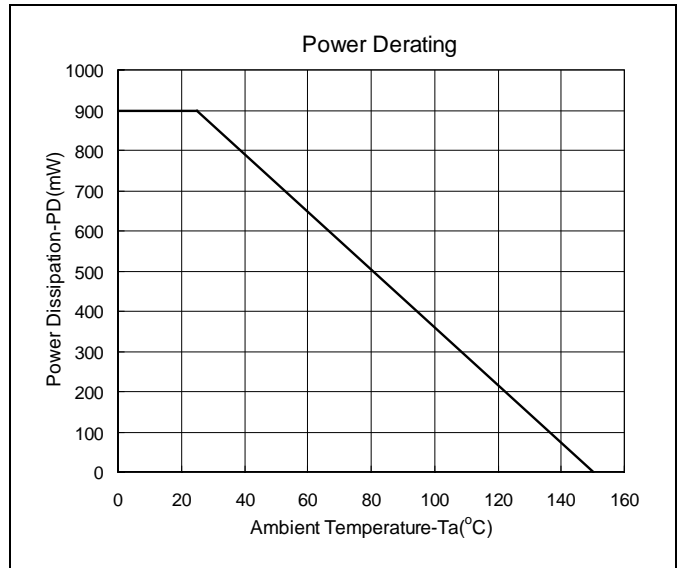
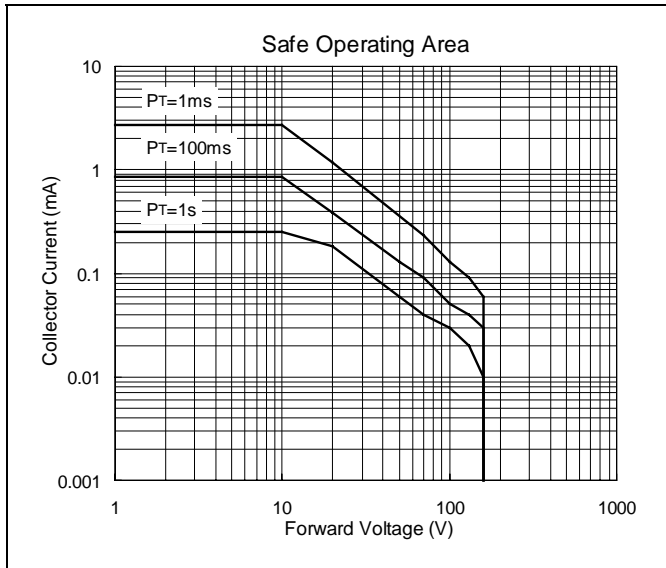
Classification of hFE1

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



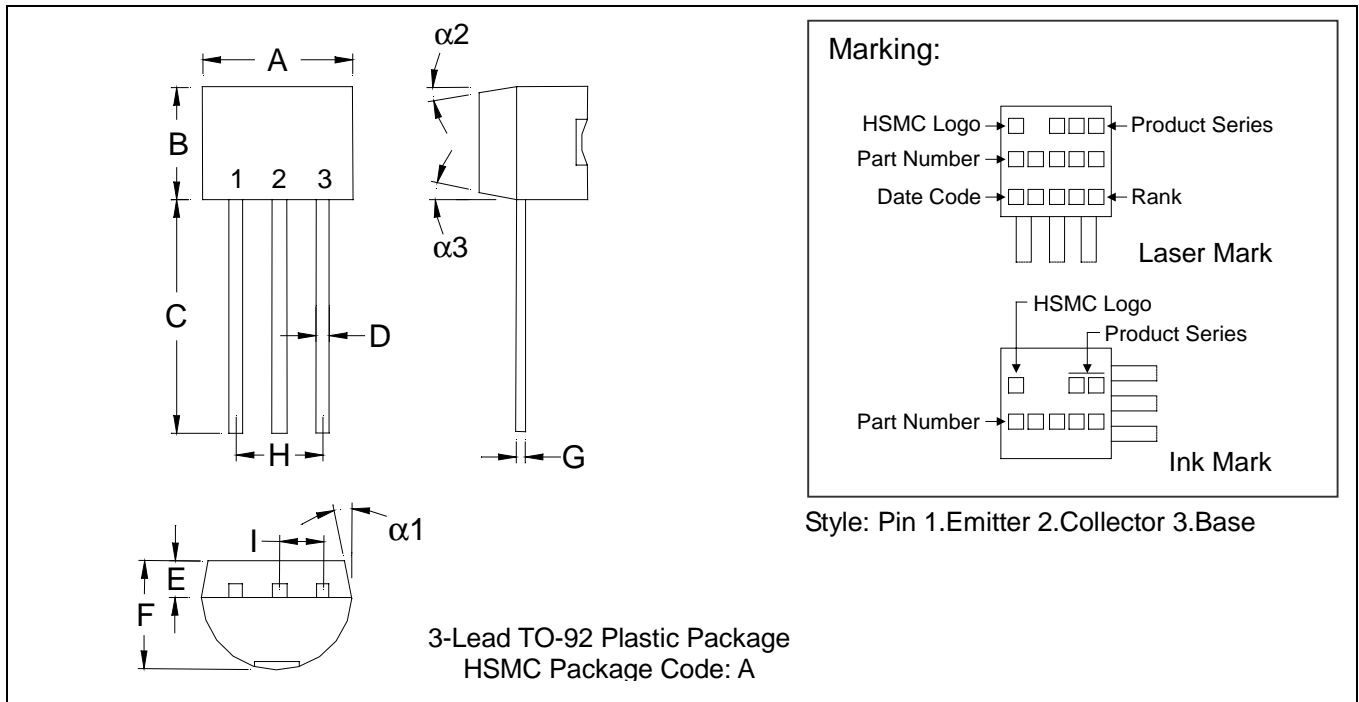
Characteristics Curve







TO-92 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1704	0.1902	4.33	4.83	G	0.0142	0.0220	0.36	0.56
B	0.1704	0.1902	4.33	4.83	H	-	*0.1000	-	*2.54
C	0.5000	-	12.70	-	I	-	*0.0500	-	*1.27
D	0.0142	0.0220	0.36	0.56	$\alpha 1$	-	*5°	-	*5°
E	-	*0.0500	-	*1.27	$\alpha 2$	-	*2°	-	*2°
F	0.1323	0.1480	3.36	3.76	$\alpha 3$	-	*2°	-	*2°

- Notes:**
1. Dimension and tolerance based on our Spec. dated Apr. 25, 1996.
 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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