



HMP5A13

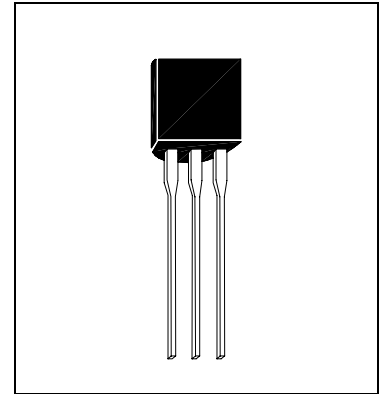
NPN SILICON DARLINGTON TRANSISTOR

Description

The HMP5A13 is designed for applications requiring extremely high current gain at collector to 500mA.

Features

- High D.C. Current Gain
- Complementary to HMP5A63



Absolute Maximum Ratings

- Maximum Temperatures
 Storage Temperature -55 ~ +150 °C
 Junction Temperature +150 °C Maximum
- Maximum Power Dissipation
 Total Power Dissipation (Ta=25°C) 600 mW
- Maximum Voltages and Currents (Ta=25°C)
 VCBO Collector to Base Voltage 30 V
 VCES Collector to Emitter Voltage..... 30 V
 VEBO Emitter to Base Voltage 10 V
 IC Collector Current 500 mA

Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	30	-	-	V	IC=100uA, IE=0
BVCES	30	-	-	V	IC=100uA, VBE=0
BVEBO	10	-	-	V	IE=10uA, IC=0
ICBO	-	-	100	nA	VCB=30V, IE=0
IEBO	-	-	100	nA	VEB=10V, IC=0
*VCE(sat)1	-	-	1.5	V	IC=100mA, IB=0.1mA
*VCE(sat)2	-	1.0	-	V	IC=500mA, IB=0.5mA
*hFE1	5	-	-	K	VCE=5V, IC=10mA
*hFE2	10	-	-	K	VCE=5V, IC=100mA
*hFE3	-	50	-	K	VCE=5V, IC=500mA
fT	125	-	-	MHz	VCE=5V, IC=10mA, f=100MHz
Cob	-	-	6	pF	VCB=10V, f=1MHz

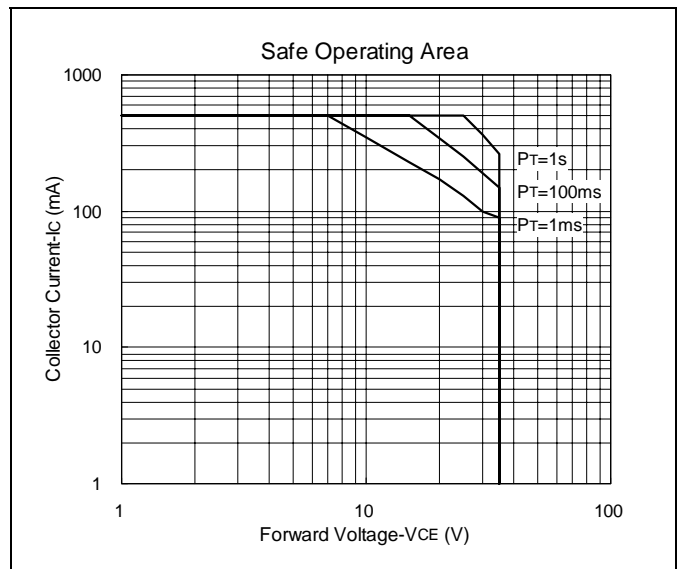
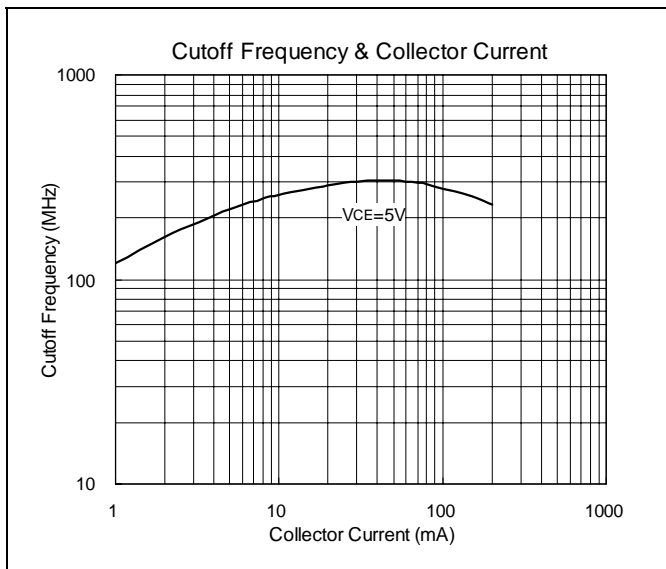
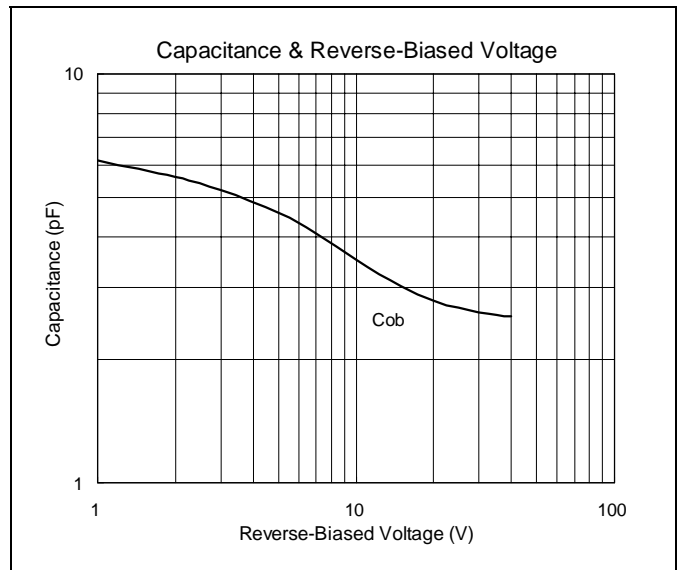
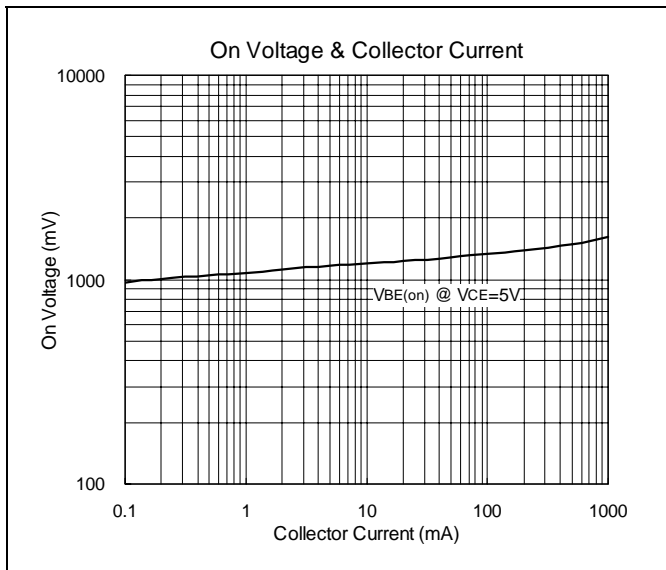
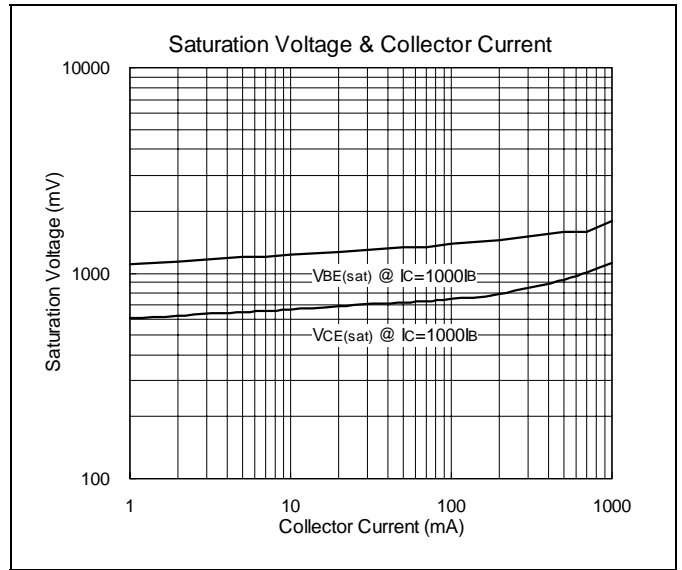
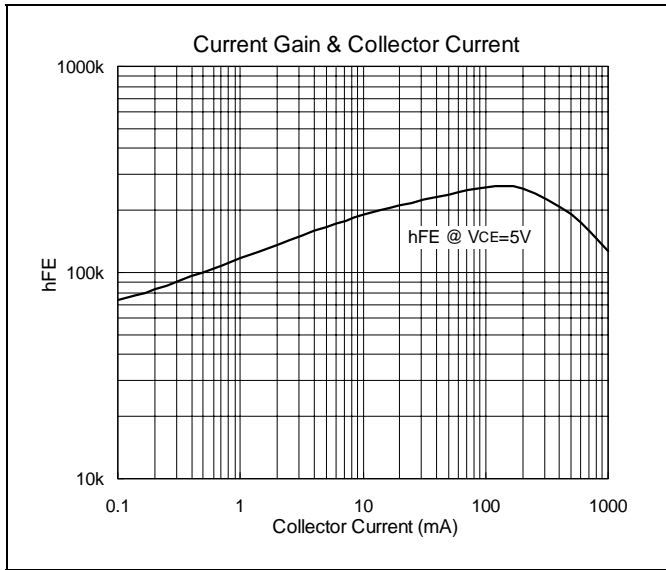
*Pulse Test : Pulse Width ≤380us, Duty Cycle≤2%

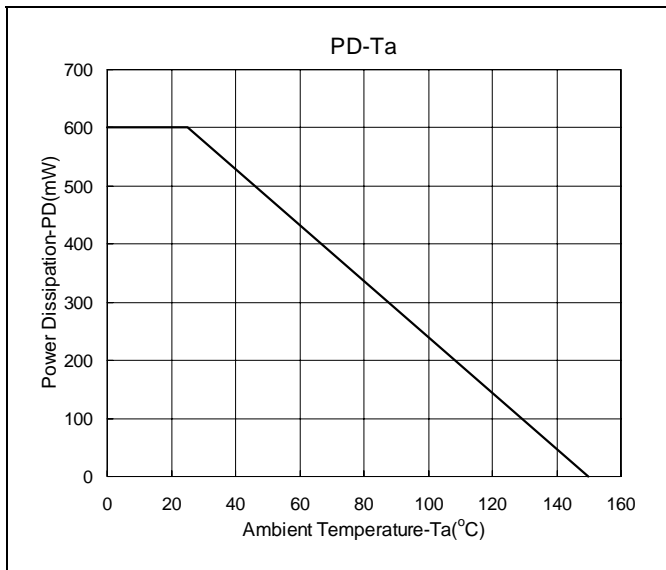
Classification Of hFE3

Rank	VCE(sat)2	hFE3
SUN	<1.2V	>20K
N	VCE(sat)2	hFE3



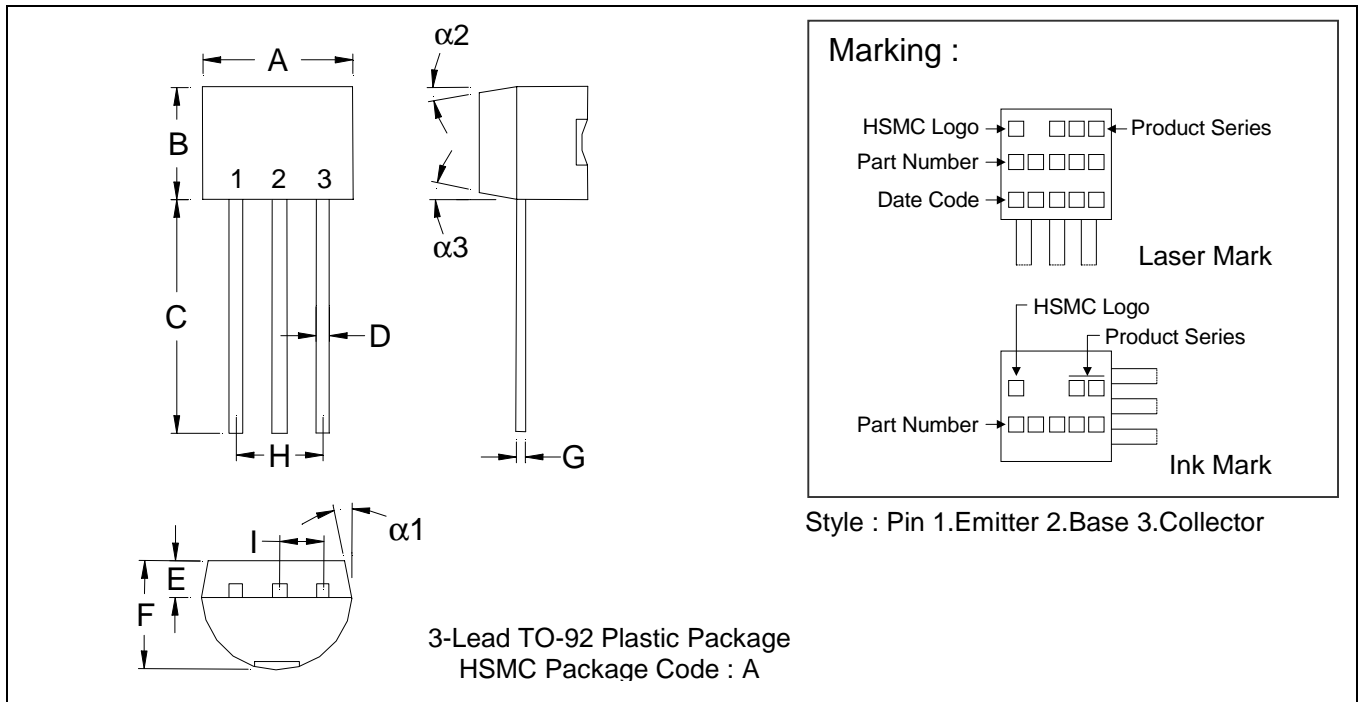
Characteristics Curve







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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