



HSA1300

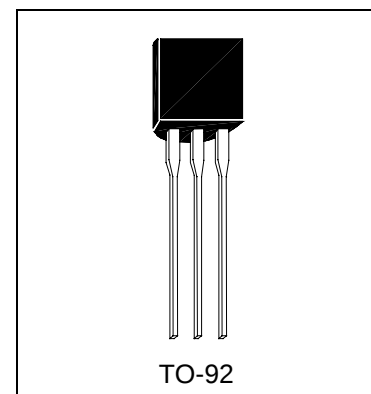
SILICON PNP EPITAXIAL TYPE

Description

- Strobo Flash Applications
- Medium Power Amplifier Applications

Features

- High DC Current Gain and Excellenr hFE Linearity
- $hFE(1)=140-600$, ($V_{CE}=-1V$, $I_C=-0.5A$)
- $hFE(2)=60$ (Min.), ($V_{CE}=-1V$, $I_C=-2A$)
- Low Saturation Voltage
- $V_{CE(sat)}=-0.5V$ (Max.), ($I_C=-2A$, $I_E=-50mA$)



TO-92

Absolute Maximum Ratings ($T_a=25^{\circ}C$)

Characteristic		Symbol	Ratios	Unit
Collector-Base Voltage		VCBO	-20	V
Collector-Emitter Voltage		VCES	-20	V
		VCEO	-10	
Emitter-Base Voltage		VEBO	-6	V
Collector Current	DC	IC	-2	A
	Pulsed (Note 1)	ICP	-5	
Base Current		IB	-0.2	A
Collector Power Dissipation		PC	750	mW
Junction Temperature		Tj	150	$^{\circ}C$
Storage Temperature Range		Tstg	-55~150	$^{\circ}C$

Note 1 : Pulse Width=10ms(Max.), Duty Cycle=30%(Max.)

Electrical Characteristics ($T_a=25^{\circ}C$)

Symbol	Min.	Typ.	Max.	Unit	Test Condition
V(BR)CEO	-10	-	-	V	$I_C=-10mA$, $I_B=0$
V(BR)EBO	-6	-	-	V	$I_E=-1mA$, $I_C=0$
ICBO	-	-	-100	nA	$V_{CE}=-20V$, $I_E=0$
IEBO	-	-	-100	nA	$V_{BE}=-6V$, $I_C=0$
*hFE1	140	-	1000		$V_{CE}=-1V$, $I_C=-0.5A$
*hFE2	60	-	-		$V_{CE}=-1V$, $I_C=-2A$
*VCE(sat)	-	-	-0.5	V	$I_C=-2A$, $I_B=-50mA$
VBE	-	-0.83	-1.5	V	$V_{CE}=-1V$, $I_C=-2A$
fT	-	140	-	MHz	$V_{CE}=-1V$, $I_C=-0.5A$
Cob	-	50	-	pF	$V_{CE}=-10V$, $I_E=0$, $f=1KHZ$

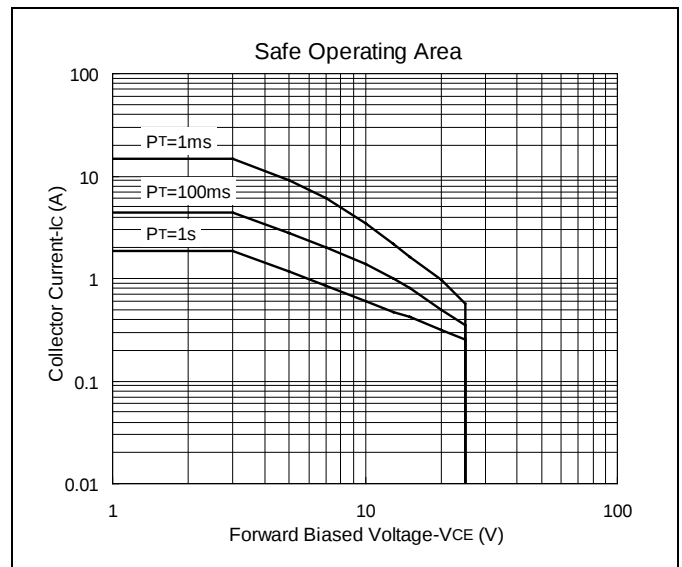
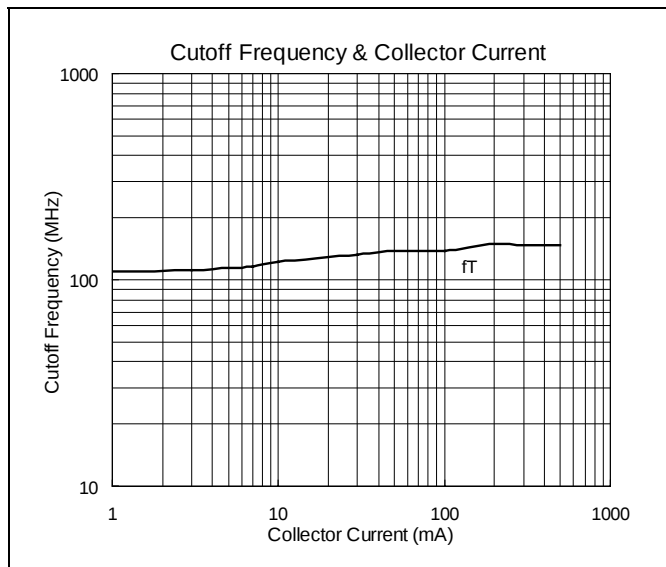
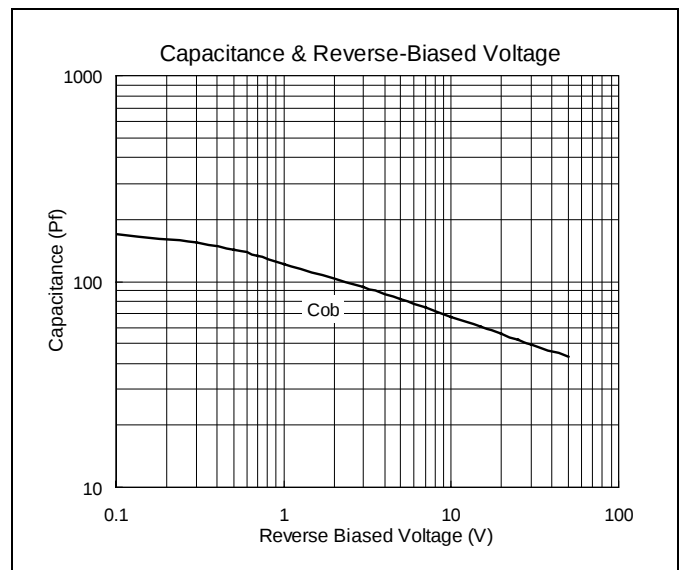
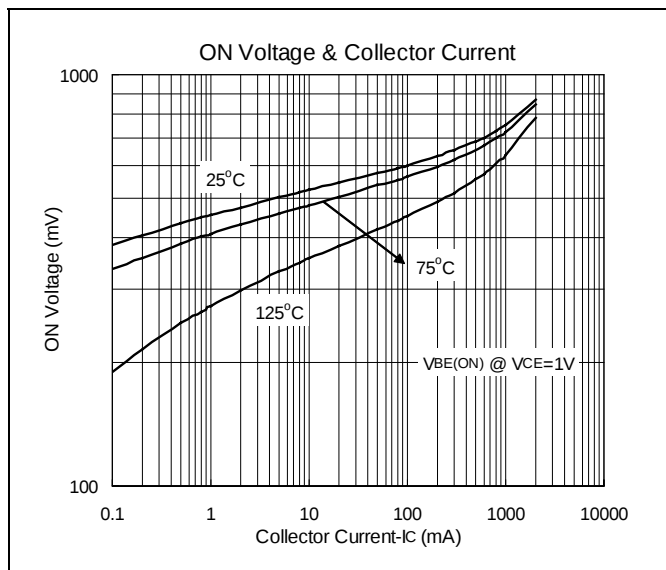
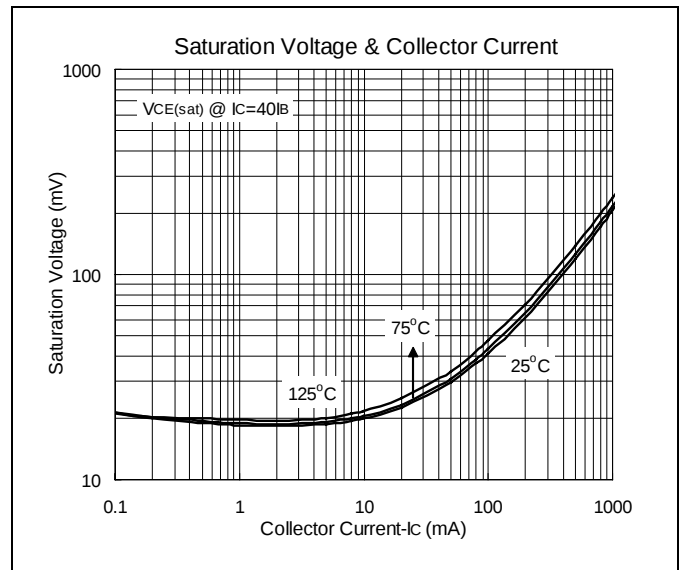
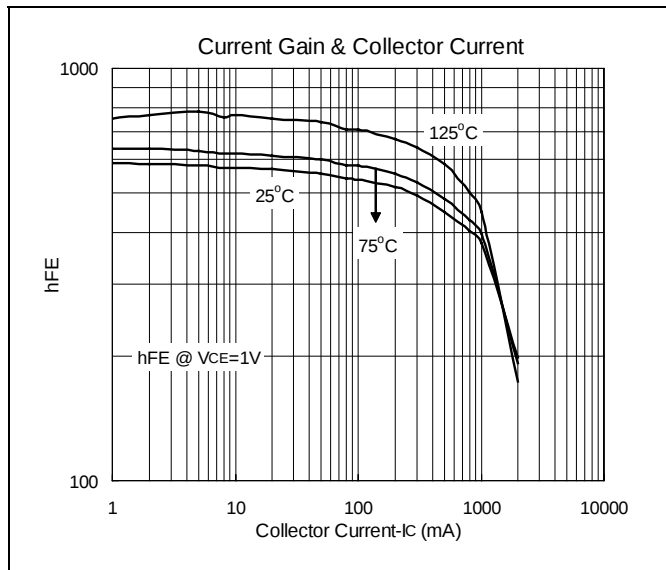
*Pulse Test: Pulse Width $\leq 380\mu s$, Duty Cycle $\leq 2\%$

Classifications of hFE1

Rank	Y	GR	BL	PE
hFE1	140-280	200-400	300-600	500~1000

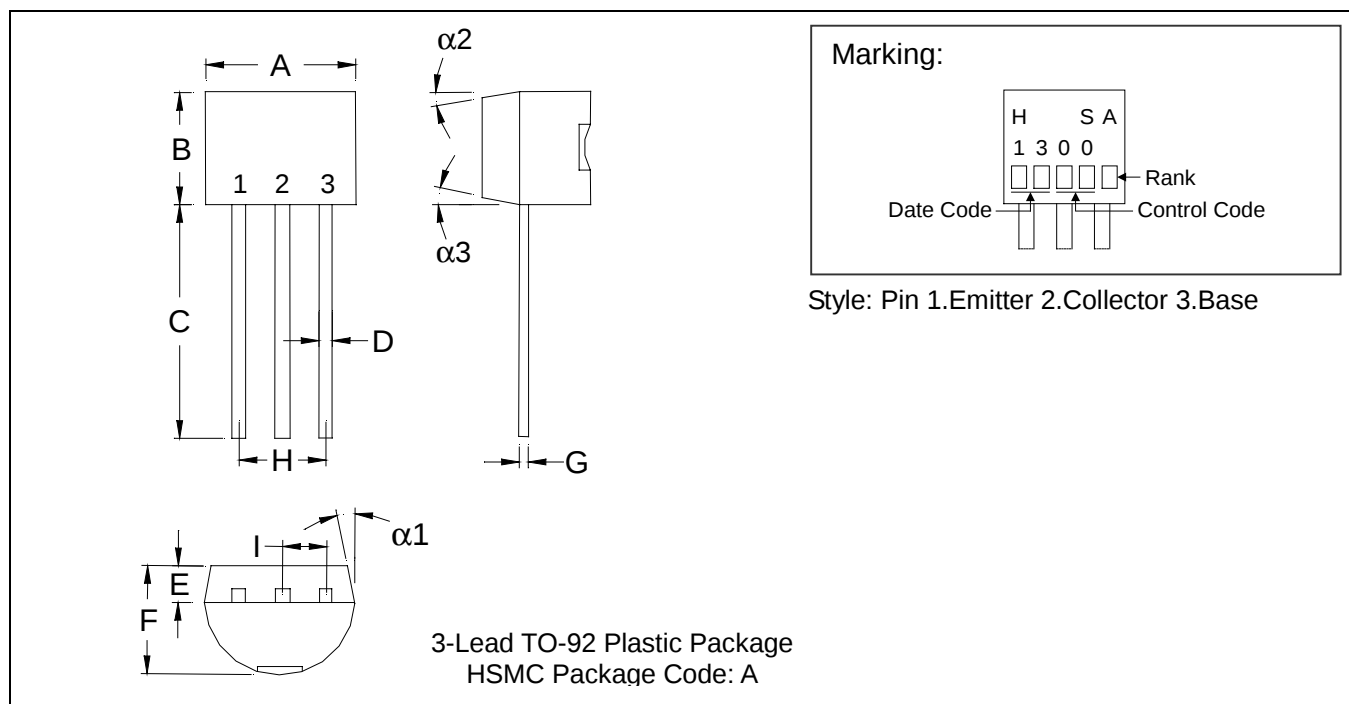


Characteristics Curve





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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