



HI3953

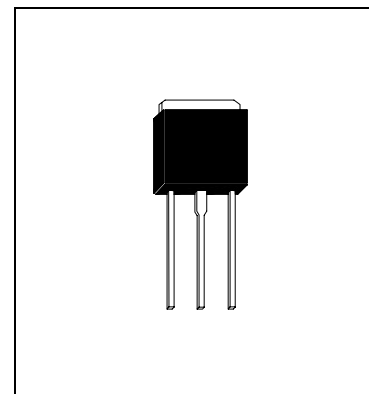
NPN EPITAXIAL PLANAR TRANSISTOR

Description

High-definition CRT display video output, wide-band amp.

Features

- High f_T : $f_T=400\text{MHz}$
- High breakdown voltage: $V_{CEO}=120\text{Vmin}$
- Small reverse transfer capacitance and excellent HF response



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

- Maximum Temperatures
Storage Temperature $-55 \sim +150^\circ\text{C}$
Junction Temperature $+150^\circ\text{C}$
- Maximum Power Dissipation
Total Power Dissipation ($T_a=25^\circ\text{C}$) 1.3 W
- Maximum Voltages and Currents
 V_{CEO} Collector to Emitter Voltage 120 V
 V_{CBO} Collector to Base Voltage 120 V
 V_{EBO} Emitter to Base Voltage 3 V
 I_C Collector Current (DC) 200 mA

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

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
V_{CBO}	120	-	-	V	$I_C=100\mu\text{A}$, $I_E=0$
V_{CEO}	120	-	-	V	$I_C=1\text{mA}$, $I_B=0$
V_{EBO}	3	-	-	V	$I_E=100\mu\text{A}$, $I_C=0$
I_{CBO}	-	-	100	nA	$V_{CB}=80\text{V}$, $I_E=0$
I_{EBO}	-	-	100	nA	$V_{EB}=2\text{V}$, $I_C=0$
* $V_{CE(sat)}$	-	-	1	V	$I_C=30\text{mA}$, $I_B=3\text{mA}$
* $V_{BE(sat)}$	-	-	1	V	$I_C=30\text{mA}$, $I_B=3\text{mA}$
* h_{FE1}	60	160	320		$V_{CE}=10\text{V}$, $I_C=10\text{mA}$
* h_{FE2}	40	-	-		$V_{CE}=10\text{V}$, $I_C=100\text{mA}$
f_T	400	-	-	MHz	$V_{CE}=10\text{V}$, $I_C=50\text{mA}$
Cob	2.1	-	-	pF	$V_{CB}=30\text{V}$, $f=1\text{MHz}$

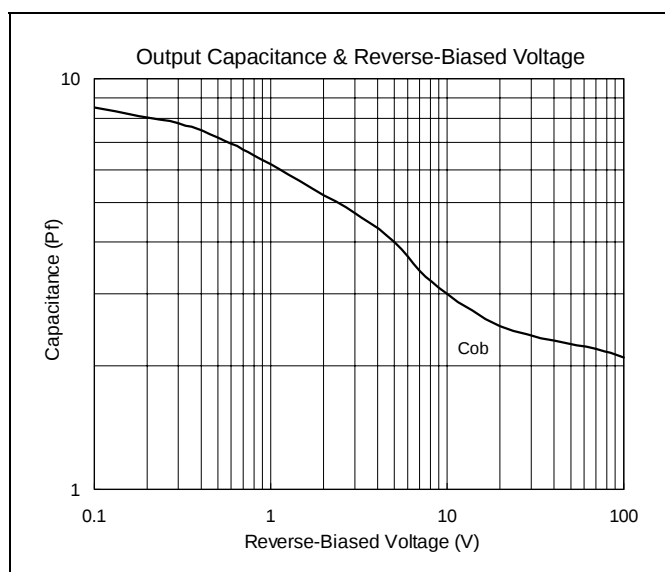
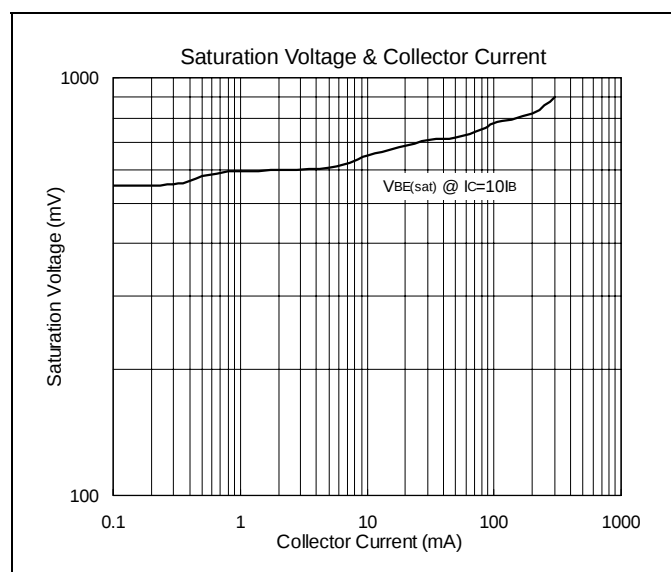
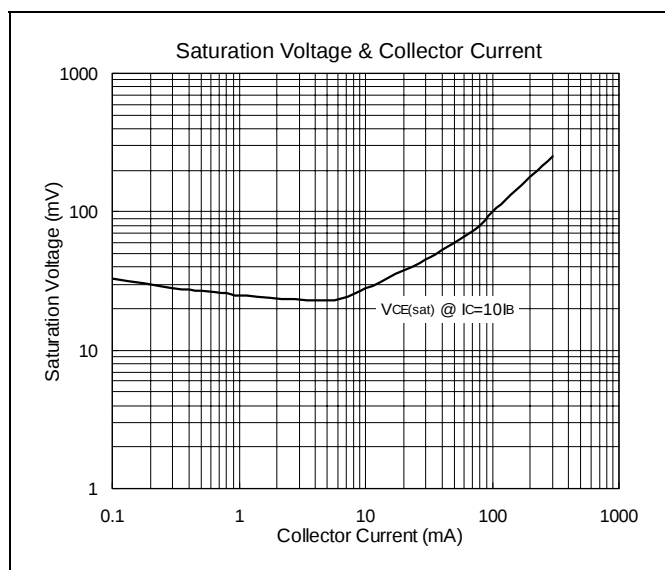
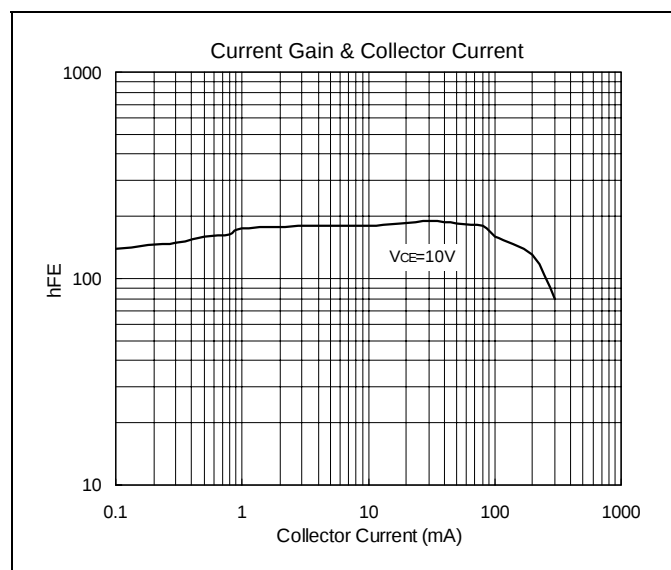
*Pulse Test : Pulse Width $\leq 380\mu\text{s}$, Duty Cycle $\leq 2\%$

Classification Of h_{FE1}

Rank	D	E	F
Range	60-120	100-200	160-320

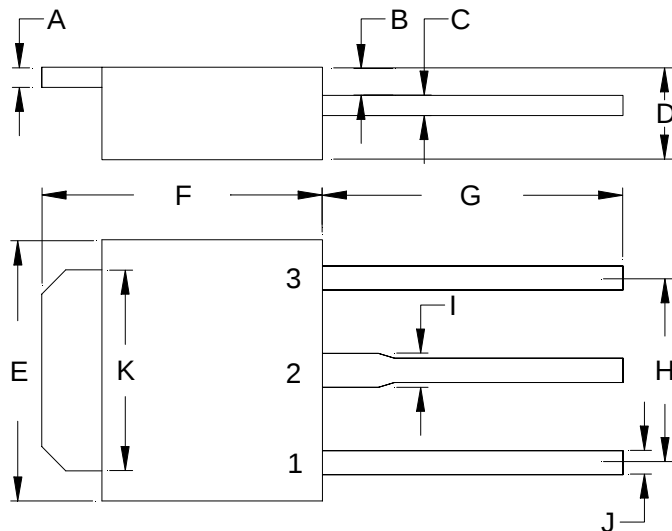


Characteristics Curve



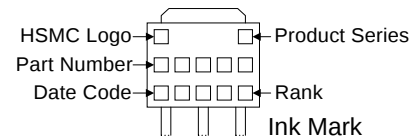


TO-251 Dimension



3-Lead TO-251 Plastic Package
HSMC Package Code : I

Marking :



Style : Pin 1.Base 2.Collector 3.Emitter

*: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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Head Office And Factory :

- **Head Office** (Hi-Sincerity Microelectronics Corp.) : 10F.,No. 61, Sec. 2, Chung-Shan N. Rd. Taipei Taiwan R.O.C.
Tel : 886-2-25212056 Fax : 886-2-25632712, 25368454
- **Factory 1** : No. 38, Kuang Fu S. Rd., Fu-Kou Hsin-Chu Industrial Park Hsin-Chu Taiwan. R.O.C
Tel : 886-3-5983621~5 Fax : 886-3-5982931
- **Factory 2** : No. 17-1, Ta-Tung Rd., Fu-Kou Hsin-Chu Industrial Park Hsin-Chu Taiwan. R.O.C
Tel : 886-3-5977061 Fax : 886-3-5979220