

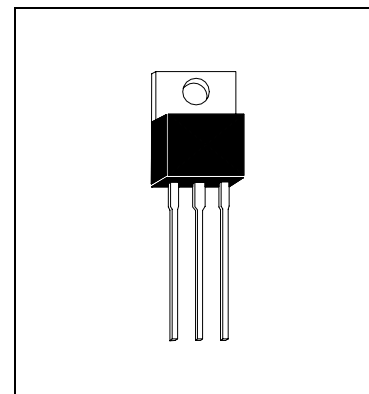


HSD1159

NPN EPITAXIAL PLANAR TRANSISTOR

Description

Capable of efficient drive with small internal loss due to excellent t_f .



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
- Maximum Power Dissipation
Total Power Dissipation ($T_c=25^\circ\text{C}$) 40 W
- Maximum Voltages and Currents
BVCBO Collector to Base Voltage 200 V
BVCEO Collector to Emitter Voltage 60 V
BVEBO Emitter to Base Voltage 6 V
IC Collector Current 4.5 A

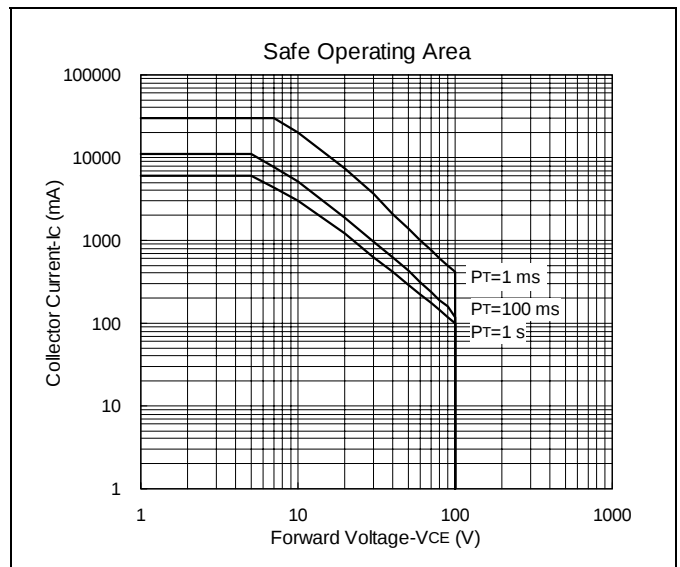
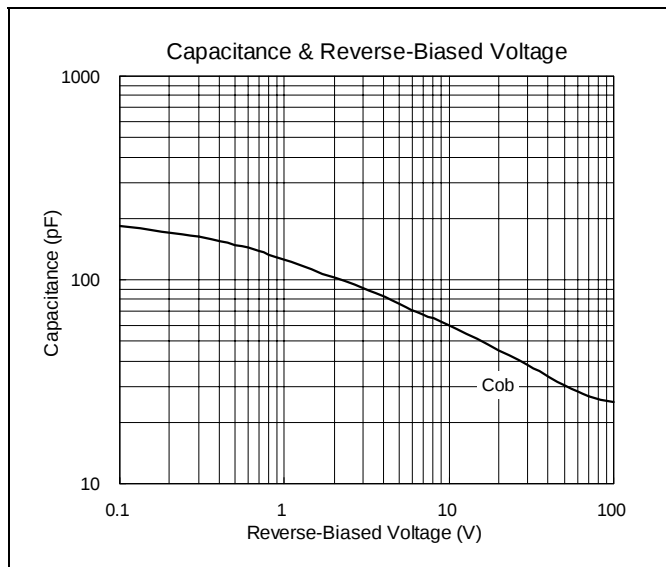
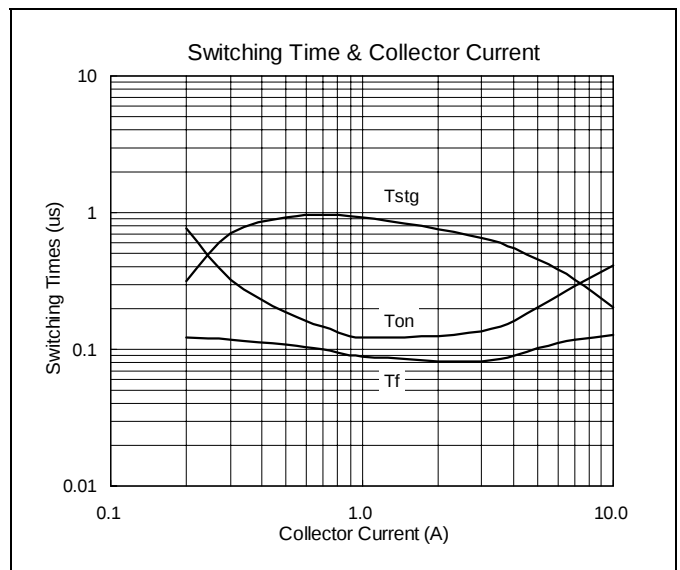
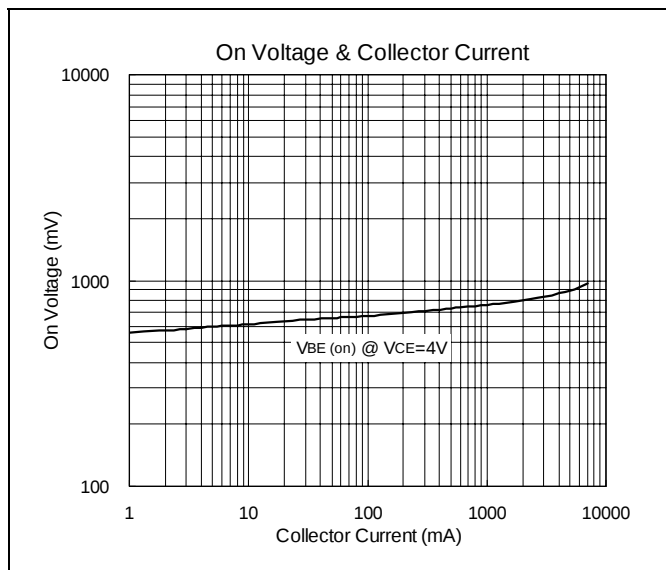
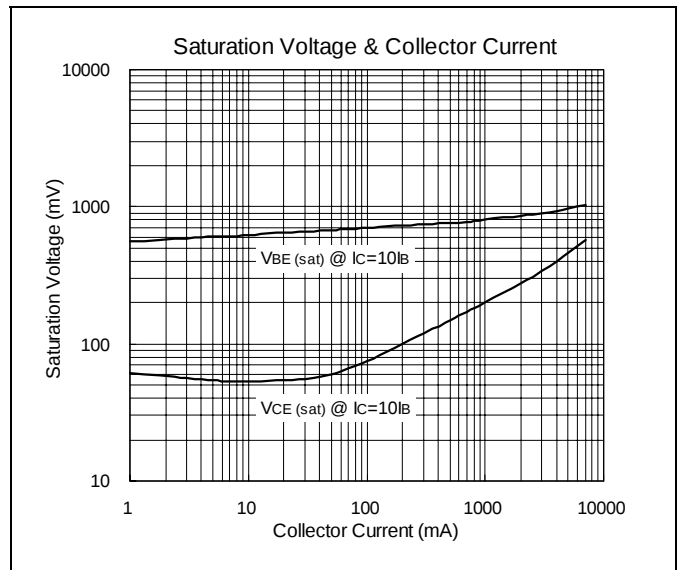
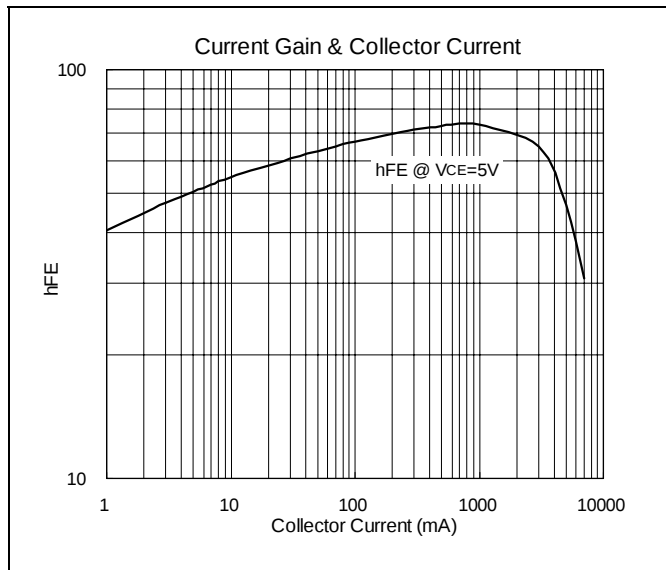
Characteristics ($T_a=25^\circ\text{C}$)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	200	-	-	V	$I_C=5\text{mA}$, $I_E=0$
BVCEO	60	-	-	V	$I_C=5\text{mA}$, $I_B=0$
BVEBO	6	-	-	V	$I_E=5\text{mA}$, $I_C=0$
ICBO	-	-	0.1	mA	$V_{CB}=40\text{V}$, $I_E=0$
IEBO	-	-	0.1	mA	$V_{EB}=5\text{V}$, $I_C=0$
*VCE(sat)	-	0.5	1	V	$I_C=4\text{A}$, $I_B=0.4\text{A}$
*VBE(sat)	-	-	1.5	V	$I_C=4\text{A}$, $I_B=0.4\text{A}$
*hFE1	30	-	160		$I_C=1\text{A}$, $V_{CE}=5\text{V}$
*hFE2	25	-	-		$I_C=4\text{A}$, $V_{CE}=5\text{V}$
f_t	-	10	-	MHz	$V_{CE}=5\text{V}$, $I_C=1\text{A}$

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

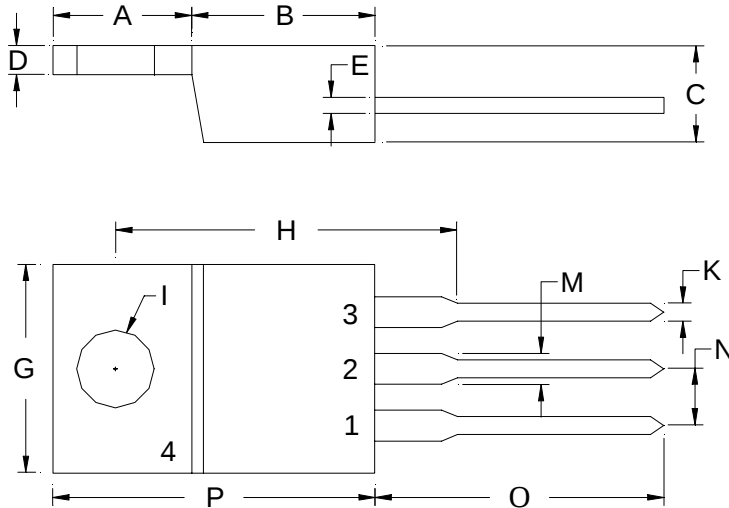


Characteristics Curve

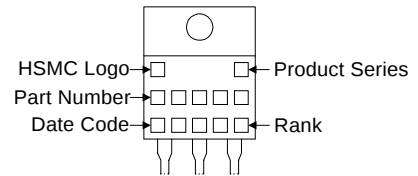




TO-220AB Dimension



Marking :



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

3-Lead TO-220AB Plastic Package
HSMC Package Code : E

*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.2197	0.2949	5.58	7.49	I	-	*0.1508	-	*3.83
B	0.3299	0.3504	8.38	8.90	K	0.0295	0.0374	0.75	0.95
C	0.1732	0.185	4.40	4.70	M	0.0449	0.0551	1.14	1.40
D	0.0453	0.0547	1.15	1.39	N	-	*0.1000	-	*2.54
E	0.0138	0.0236	0.35	0.60	O	0.5000	0.5618	12.70	14.27
G	0.3803	0.4047	9.66	10.28	P	0.5701	0.6248	14.48	15.87
H	-	*0.6398	-	*16.25					

Notes : 1.Dimension and tolerance based on our Spec. dated Sep. 07,1997.

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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