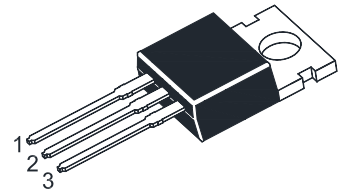


TIP127-HAF

PNP Silicon Epitaxial Planar Darlington Power Transistor

Features

- Halogen and Antimony Free(HAF),
RoHS compliant



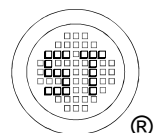
TO-220FB Plastic Package
1.Base 2.Collector 3.Emitter

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	100	V
Collector Emitter Voltage	$-V_{CEO}$	100	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	5	A
Peak Collector Current, Pulsed	$-I_{CM}$	8	A
Base Current	$-I_B$	0.1	A
Total Power Dissipation	P_{tot}	$T_C \leq 25^\circ\text{C}$ 16.3 $T_a \leq 25^\circ\text{C}$ 2.3	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

Thermal Characteristics

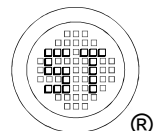
Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	54	$^\circ\text{C/W}$
Thermal Resistance from Junction to Case	$R_{\theta JC}$	7.7	$^\circ\text{C/W}$



TIP127-HAF

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

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE} = 3\text{ V}$, $-I_C = 0.5\text{ A}$ at $-V_{CE} = 3\text{ V}$, $-I_C = 3\text{ A}$	h_{FE} h_{FE}	1000 1000	- -	- -
Collector Emitter Cutoff Current at $-V_{CE} = 50\text{ V}$	$-I_{CEO}$	-	0.5	mA
Collector Base Cutoff Current at $-V_{CB} = 100\text{ V}$	$-I_{CBO}$	-	0.2	mA
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	2	mA
Collector Emitter Sustaining Voltage at $-I_C = 30\text{ mA}$	$-V_{CEO(SUS)}$	100	-	V
Collector Emitter Saturation Voltage at $-I_C = 3\text{ A}$, $-I_B = 12\text{ mA}$ at $-I_C = 5\text{ A}$, $-I_B = 20\text{ mA}$	$-V_{CE(sat)}$	- -	2 4	V
Base Emitter On Voltage at $-I_C = 3\text{ A}$, $-V_{CE} = 3\text{ V}$	$-V_{BE(on)}$	-	2.5	V



Electrical Characteristics Curves

Fig. 1 Output Characteristics Curve

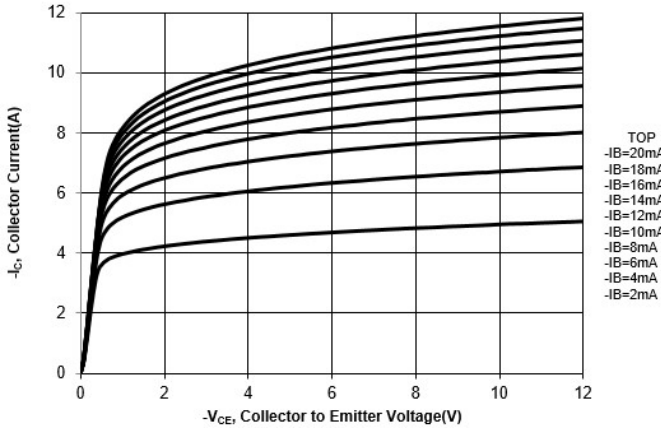


Fig. 2 Collector Current vs. Base to Emitter Voltage

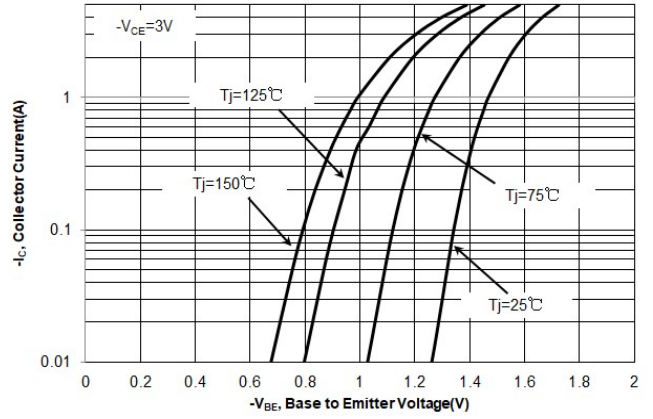


Fig. 3 hFE,DC Current Gain vs. Collector Current

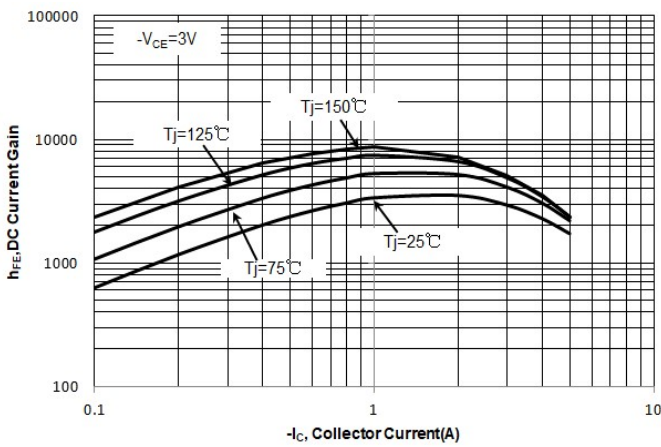
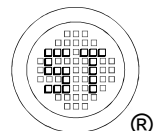
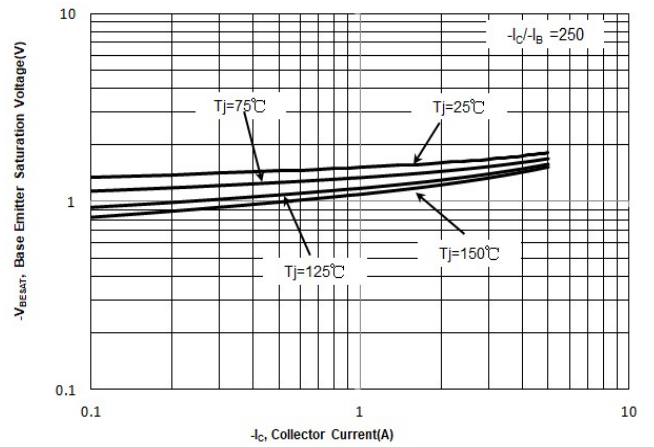


Fig. 4 V_{BESAT} vs. Collector Current



TIP127-HAF

Electrical Characteristics Curves

Fig. 5 V_{CESAT} vs. Collector Current

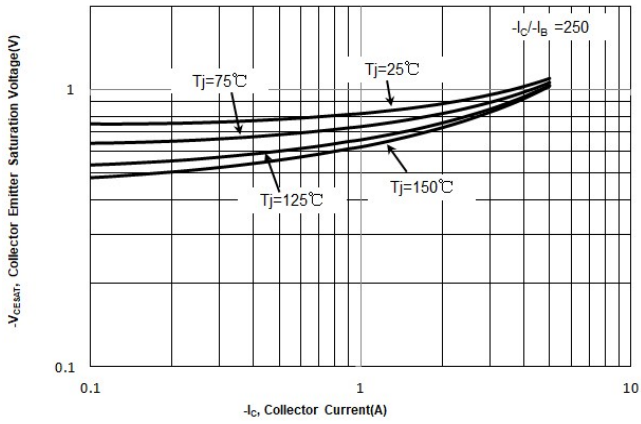


Fig. 6 Output Capacitance

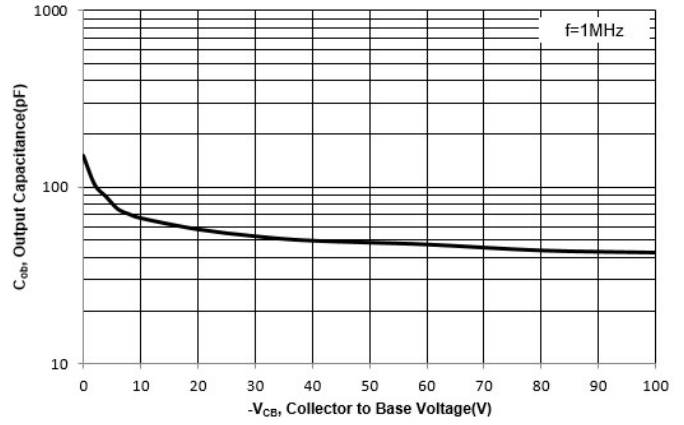
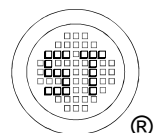
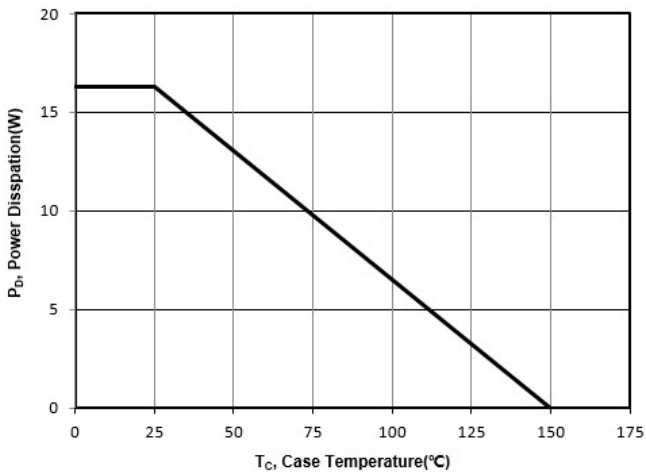


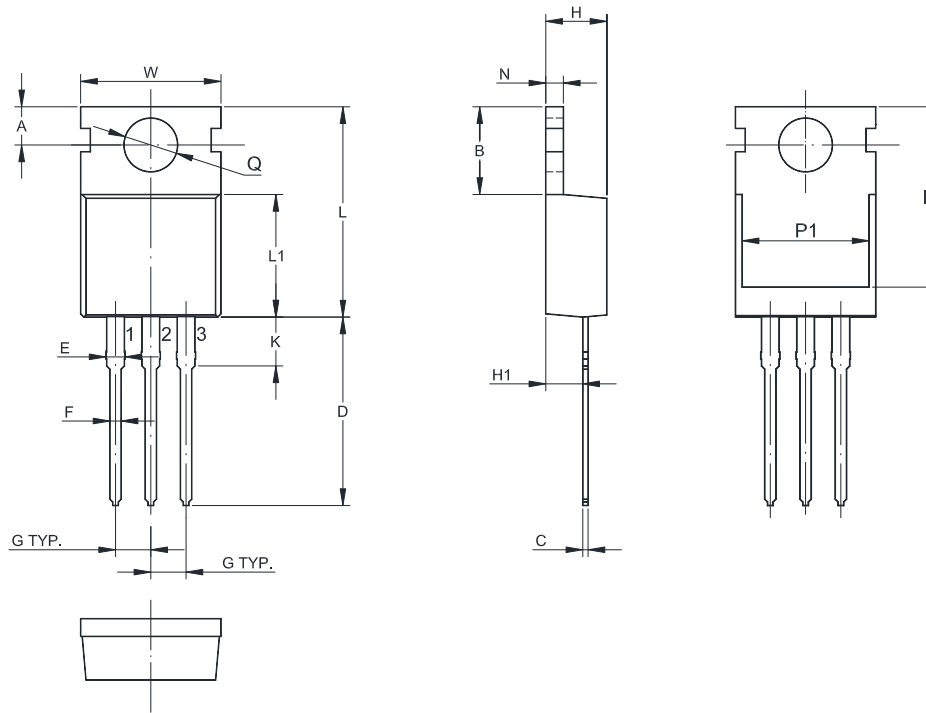
Fig. 7 Power Derating Curve



TIP127-HAF

Package Outline Dimensions (Units: mm)

TO-220FB



UNIT	A	B	C	D	E	F	G	W	H	H1	K	L	L1	N
mm	2.9	6.8	0.7	15	1.5	0.9	2.54	10.2	4.7	2.5	3.1	16.8	9.4	1.4
	2.7	6.4	0.3	11	1.1	0.7	TYP	9.8	4.3	2.2	2.7	14.8	9.0	1.2

UNIT	P	P1	Q
mm	13.3	8.2	3.7
	12.7	7.6	3.5

Packing information

Package	Carton Quantity	Box Quantity	Base Quantity	Delivery Mode
TO-220FB	5 K / Carton	1 K / Box	50 pcs / Tube	Tube

Marking information

" TIP127 " = Part No.

" ***** " = Date Code Marking

Font type: Arial

