

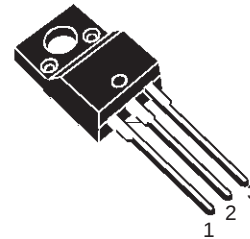
COMPLEMENTARY SILICON POWER DARLINGTON TRANSISTORS

- SGS-THOMSON PREFERRED SALESTYPES
- FULLY MOLDED ISOLATED PACKAGE
- 2000 V DC ISOLATION (U.L. COMPLIANT)

DESCRIPTION

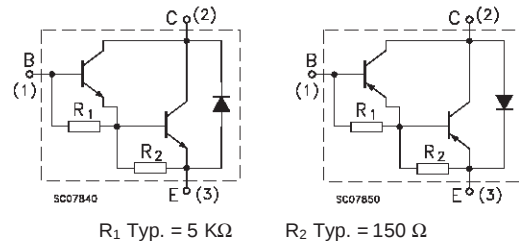
The TIP122FP is a silicon epitaxial-base NPN power transistor in monolithic Darlington configuration Jedec TO-220FP fully molded isolated package, intended for use in power linear and switching applications.

The complementary PNP type is TIP127FP.



TO-220FP

INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	NPN	TIP122FP	Unit
		PNP	TIP127FP	
V _{CBO}	Collector-Base Voltage (I _E = 0)		100	V
V _{CEO}	Collector-Emitter Voltage (I _B = 0)		100	V
V _{EBO}	Emitter-Base Voltage (I _C = 0)		5	V
I _C	Collector Current		5	A
I _{CM}	Collector Peak Current		8	A
I _B	Base Current		0.1	A
P _{tot}	Total Dissipation at T _{case} ≤ 25 °C T _{amb} ≤ 25 °C		29 2	W W
T _{stg}	Storage Temperature		-65 to 150	°C
T _j	Max. Operating Junction Temperature		150	°C

* For PNP types voltage and current values are negative.

THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-case	Max	4.3	°C/W
R _{thj-amb}	Thermal Resistance Junction-ambient	Max	62.5	°C/W

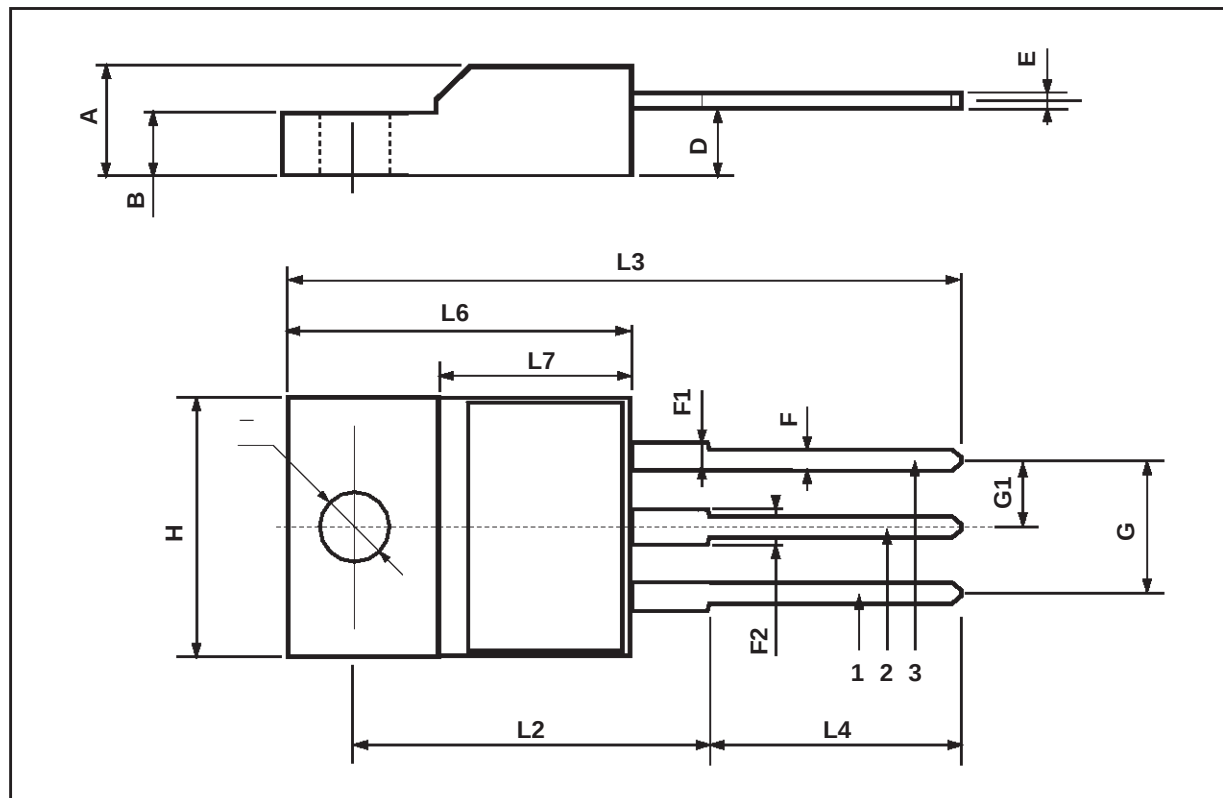
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CEO}	Collector Cut-off Current (I _B = 0)	V _{CE} = 50 V			0.5	mA
I _{CBO}	Collector Cut-off Current (I _B = 0)	V _{CE} = 100 V			0.2	mA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = 5 V			2	mA
V _{CEO(sus)} *	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = 30 mA	100			V
V _{CE(sat)} *	Collector-Emitter Saturation Voltage	I _C = 3 A I _C = 5 A	I _B = 12 mA I _B = 20 mA		2 4	V V
V _{BE(on)} *	Base-Emitter Voltage	I _C = 3 A	V _{CE} = 3 V		2.5	V
h _{FE} *	DC Current Gain	I _C = 0.5 A I _C = 3 A	V _{CE} = 3 V V _{CE} = 3 V	1000 1000		

* For PNP types voltage and current values are negative.

TO-220FP MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.4		4.6	0.173		0.181
B	2.5		2.7	0.098		0.106
D	2.5		2.75	0.098		0.108
E	0.45		0.7	0.017		0.027
F	0.75		1	0.030		0.039
F1	1.15		1.7	0.045		0.067
F2	1.15		1.7	0.045		0.067
G	4.95		5.2	0.195		0.204
G1	2.4		2.7	0.094		0.106
H	10		10.4	0.393		0.409
L2		16			0.630	
L3	28.6		30.6	1.126		1.204
L4	9.8		10.6	0.385		0.417
L6	15.9		16.4	0.626		0.645
L7	9		9.3	0.354		0.366
Ø	3		3.2	0.118		0.126



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