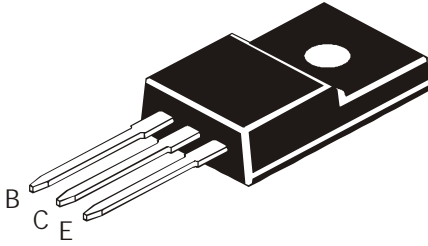


NPN/PNP SILICON POWER DARLINGTON TRANSISTORS

**TIP122F NPN
TIP127F PNP
TO-220FP**



Designed for General-Purpose Amplifier and Low-Speed Switching Applications.

ABSOLUTE MAXIMUM RATINGS(Ta=25deg C)

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector -Base Voltage	VCBO	100	V
Collector -Emitter Voltage	VCEO	100	V
Emitter Base Voltage	VEBO	5.0	V
Collector Current -Continuous	IC	5.0	A
Collector Current (Peak)	ICM	8.0	A
Base Current	IB	120	mA
Total Power Dissipation @ Tc=25 deg C	PD	65	W
Derate Above 25 deg C		0.52	W/deg C
Total Power Dissipation @ Ta=25 deg C	PD	2.0	W
Derate Above 25 deg C		0.016	W/deg C
Unclamped Inductive Load Energy (1)	E	50	mj
Junction Temperature	Tj	150	deg C
Storage Temperature Range	Tstg	-65 to +150	deg C
THERMAL RESISTANCE			
From Junction to Ambient	Rth(j-a)	62.5	deg C/W
From Junction to Case	Rth(j-c)	1.92	deg C/W

(1) IC=1A, L=100mH,P.R.F.=10Hz, VCC=20V, RBE=100 ohms

ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Specified)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Emitter (sus) Voltage	VCEO (sus) *	IC=100mA, IB=0	100	-	V
Collector Cut off Current	ICBO	VCB=100V, IE=0	-	0.2	mA
		IB=0, VCE=50V	-	0.5	mA
Emitter Cut off Current	IEBO	VEB=5V, IC=0	-	2.0	mA
		IC=3A, IB=12mA	-	2.0	V
Collector Emitter Saturation Voltage	VCE(Sat)*	IC=5A, IB=20mA	-	4.0	V
		IC=3A, VCE=3V	-	2.5	V
Base Emitter on Voltage	VBE(on) *	IC=3A, VCE=3V	-	2.5	V
DC Current Gain	hFE*	IC=0.5A, VCE=3V	1.0	-	K
		IC=3A, VCE=3V	1.0	-	K

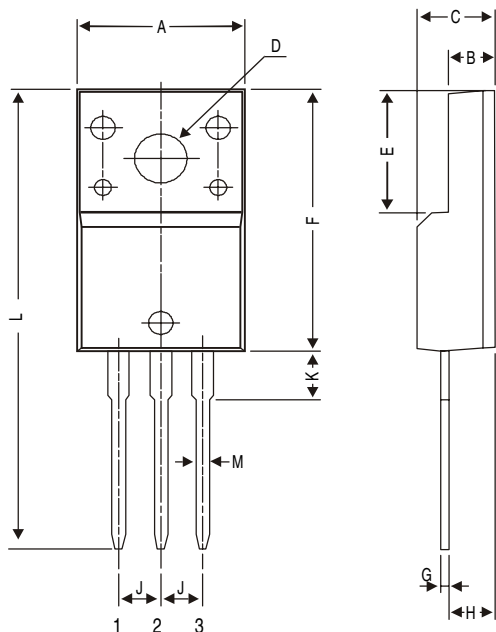
ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Specified)

TIP122F/127F

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT	
Small Signal Current Gain	/hfe/	IC=3A, VCE=4V f=1MHz	4.0	-		
Output Capacitance	Cob	Cob=10V, IE=0, f=0.1MHz				
			PNP	-	300	pF
			NPN	-	200	pF

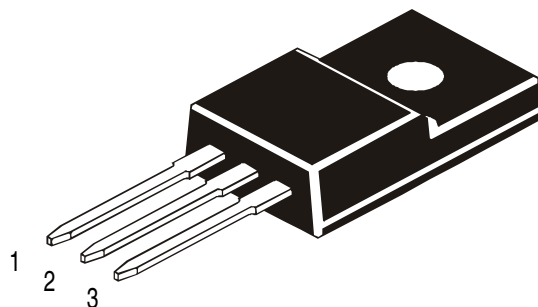
*Pulse test: Pulse Width=300 us; Duty Cycle=2%

TO-220FP (Fully Isolated) Plastic Package



All dimensions in mm.

DIM	MIN	MAX
A	9.96	10.36
B	2.60	3.00
C	4.50	4.90
D	3.10	3.30
E	7.90	8.20
F	16.87	17.27
G	0.45	0.50
H	2.56	2.96
J	2.34	2.74
K	—	3.08
L	—	30.05
M	—	0.80



PIN CONFIGURATION

1. BASE
2. COLLECTOR
3. EMITTER

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-220FP	200 pcs/polybag	396 gm/200 pcs	3" x 7.5" x 7.5"	1.0K	17" x 15" x 13.5"	16.0K	36 kgs
	50 pcs/tube	120 gm/50 pcs	3.5" x 3.7" x 21.5"	1.0K	19" x 19" x 19"	10.0K	29 kgs

Customer Notes

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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