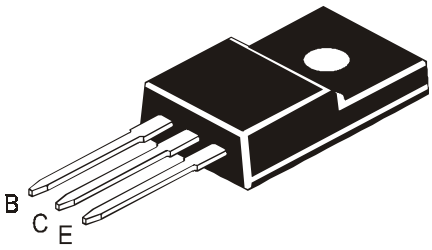
SILICON PLANAR DARLINGTON POWER TRANSISTORS

CJF122 NPN
CJF127 PNP



TO-220FP Fully Isolated Plastic Package

General Purpose Darlingtons Amplifier and Switching Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	100	V
Collector Emitter Voltage	V_{CEO}	100	V
Emitter Base Voltage	V_{EBO}	5	V
RMS Isolation Voltage (for 1sec, R.H.	(1) V_{ISOL} (a)	3500	V_{RMS}
<30%, T_A=25ºC)	(b)	1500	V_{RMS}
Collector Current - Continuous	Ic	5	A
Peak		8	A
Base Current	I_B	0.12	A
Total Power Dissipation @ Tc=25ºC	P_{D**}	30	W
Derate Above 25ºC		0.24	W/ºC
Total Power Dissipation @ Ta=25ºC	P_D	2	W
Derate Above 25ºC		0.016	W/ºC
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to + 150	ºC

THERMAL RESISTANCE

From Junction to Ambient	$R_{th\ (j-a)}$	62.5	ºC/W
From Junction to Case	$R_{th\ (j-c)\ **}$	4.1	ºC/W
Lead Temperature for Soldering Purpose	T_L	260	ºC

****Measurement made with thermocouple contacting the bottom insulated mounting surface (in a location beneath the die), the device mounted on a heatsink with thermal grease and a mounting torque of ≥6 in.lbs.**

(1) RMS Isolation Voltage : (a) 3500 V_{RMS} with Package in Clip Mounting Position (b) 1500 V_{RMS} with Package in Screw Mounting Position (for 1sec, R.H.<30%Ta=25ºC; Pulse Test: Pulse Width ≤300µs, Duty Cycle≤2%)

ELECTRICAL CHARACTERISTICS (T_C=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Emitter Sustaining Voltage	$V_{CEO\ (sus)}$ *	I_C=100mA, I_B=0	100	-	V
Collector Cut off Current	I_{CEO}	V_{CE}= 50V, I_B=0	-	10	µA
	I_{CBO}	V_{CB}= 100V, I_E=0	-	10	µA
Emitter Cut off Current	I_{EBO}	V_{BE}=5V, I_C=0	-	2.0	mA
Collector Emitter Saturation Voltage	$V_{CE\ (sat)}$ *	I_C=3A, I_B=12mA	-	2.0	V
		I_C=5A, I_B=20mA	-	3.5	V

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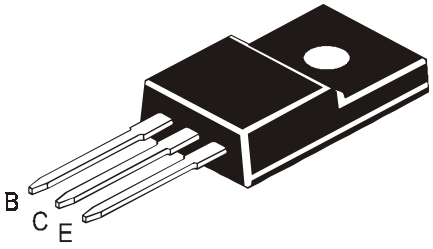

TO-220FP Fully Isolated Plastic Package

ELECTRICAL CHARACTERISTICS (T_C=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Base Emitter on Voltage	$V_{BE\ (on)}$ *	I_C=3A, V_{CE}=3V	-	2.5	V
DC Current Gain	h_{FE} *	I_C=0.5A, V_{CE}=3V	1000	-	
		I_C=3A, V_{CE}=3V	2000	-	
DYNAMIC CHARACTERISTICS				-	
Small Signal Current Gain	$\|h_{fe}\|$	I_C=3A, V_{CE}=4V,f=1MH	4.0	-	
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=0.1MHz			
		CJF122	-	200	pF
		CJF127	-	300	pF

*** Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2 %**

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CJF127 PNP

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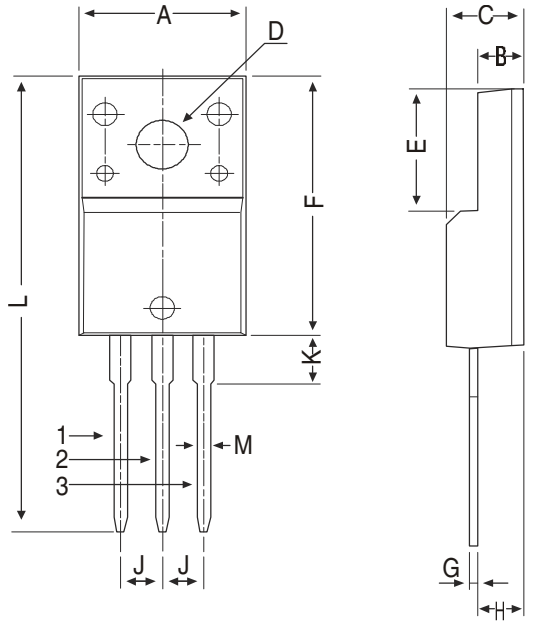
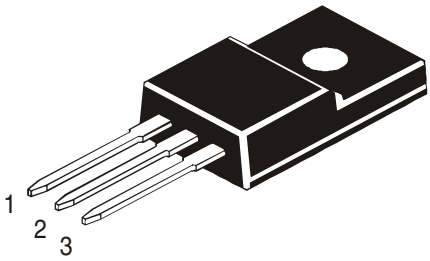


DIM	MIN	MAX
A	9.80	10.36
B	2.50	3.00
C	4.30	4.90
D	3.10	3.40
E	6.50	8.20
F	14.80	17.27
G	0.40	0.70
H	2.50	2.96
J	2.34	2.74
K	—	4.70
L	—	30.05
M	0.6	0.90

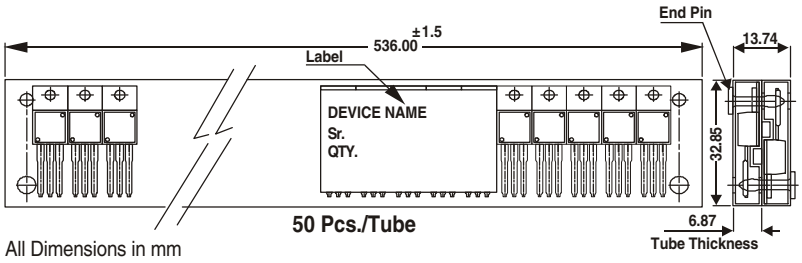
All diminsions in mm.



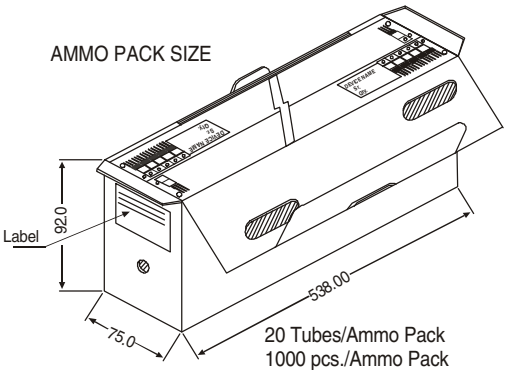
Pin Configuration

1. Base
2. Collector
3. Emitter

TO-220 FP Tube Packing



All Dimensions in mm



20 Tubes/Ammo Pack
1000 pcs./Ammo Pack

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"	1K	17" x 15" x 13.5"	16K	36 kgs
	50 pcs/tube	135 gm/50 pcs	3.5" x 3.7" x 21.5"	1K	19" x 19" x 19"	10K	28 kgs

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

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