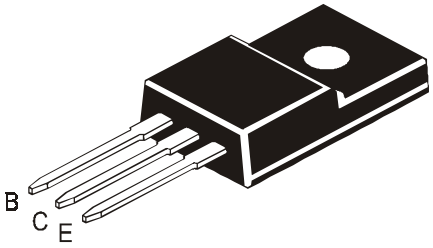
Continental Device India Limited
An IS/ISO 9002 and IECQ Certified Manufacturer

IS/ISO 9002
Lic# QSC/L- 000019.2

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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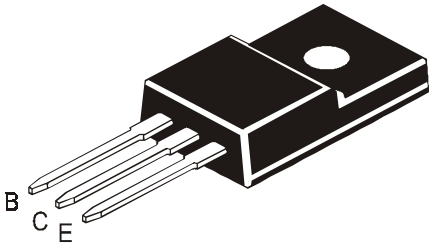

TO-220FP Fully Isolated Plastic Package

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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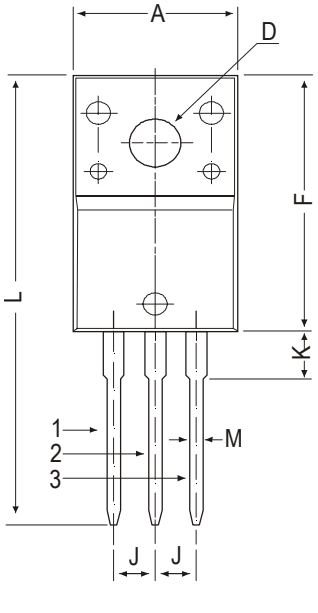
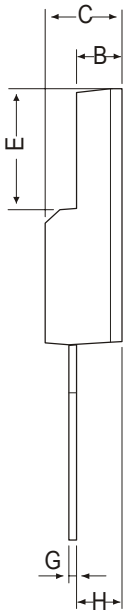
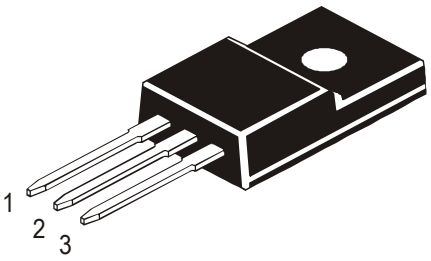




DIM	MIN	MAX
A	9.96	10.36
B	2.60	3.00
C	4.50	4.90
D	3.10	3.30
E	7.90	8.20
F	16.87	17.27
G	0.45	0.50
H	2.56	2.96
J	2.34	2.74
K	—	3.08
L	—	30.05
M	—	0.80

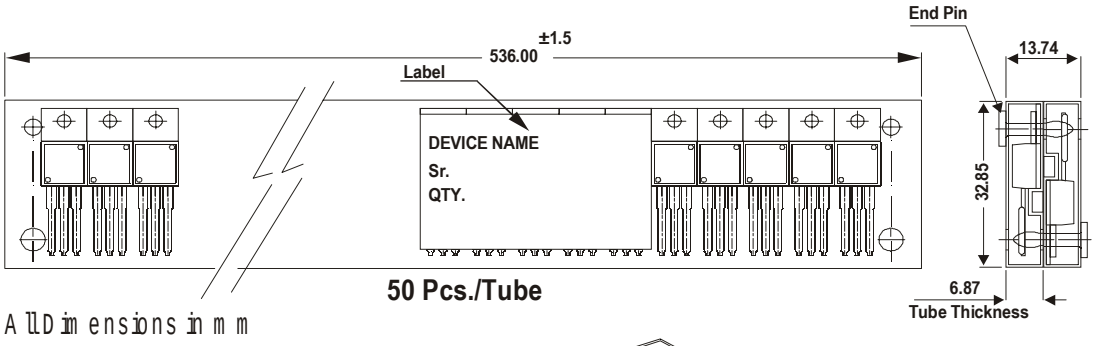
All diminsions in mm.



Pin Configuration

1. Base
2. Collector
3. Emitter

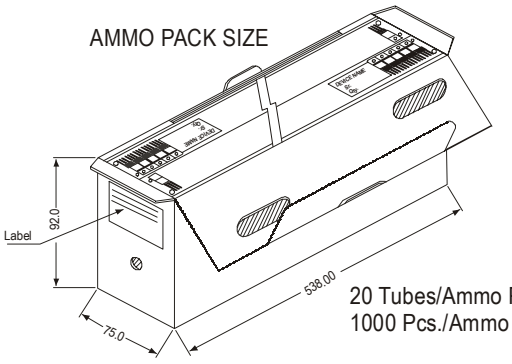
TO-220 FP Tube Packing



50 Pcs./Tube

All Dimensions in mm

AMMO PACK SIZE



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 50 pcs/tube	396 gm/200 pcs 135 gm/50 pcs	3" x 7.5" x 7.5" 3.5" x 3.7" x 21.5"	1K 1K	17" x 15" x 13.5" 19" x 19" x 19"	16K 10K	36 kgs 28 kgs

Notes

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Disclaimer

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Continental Device India Limited
C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-579 6150 Fax + 91-11-579 9569, 579 5290
e-mail sales@cdil.com www.cdil.com

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