Continental Device India Limited

An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company

EPITAXIAL SILICON POWER TRANSISTORS

CJD175 CJD176
CJD177 CJD178
CJD179 CJD180
NPN PNP

PIN CONFIGURATION
1. BASE
2. COLLECTOR
3. EMITTER

DPAK (TO-252)
Plastic Package

Intended for use in Medium Power Linear Switching Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	CJD175 CJD176	CJD177 CJD178	CJD179 CJD180	UNIT
Collector -Emitter Voltage	V_{CEO}	45	60	80	V
Collector -Base Voltage	V_{CBO}	45	60	80	V
Emitter Base Voltage	V_{EBO}	5.0			V
Collector Current	I_C	3.0			A
Collector Peak Current	I_{CM}	7.0			A
Power Dissipation @ T_a=25ºC Derate above 25ºC	P_D	1.25 10			W mW/ºC
Power Dissipation @ T_c=25ºC	P_D	30			W
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +150			ºC

THERMAL CHARACTERISTICS

Junction to Ambient in free air	$R_{th\ (j-a)}$	100	ºC/W
Junction to Case	$R_{th\ (j-c)}$	4.16	ºC/W

ELECTRICAL CHARACTERISTICS (T_c=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION		MIN	MAX	UNIT
Collector Cut off Current	I_{CBO}	V_{CB}=45V, I_E=0	CJD175/76		100	µA
		V_{CB}=60V, I_E=0	CJD177/78		100	µA
		V_{CB}=80V, I_E=0	CJD179/80		100	µA
Emitter Cut off Current	I_{EBO}	V_{EB}=5V, I_C=0			1.0	mA
Collector Emitter Sustaining Voltage	*$V_{CEO\ (sus)}$	I_C=100mA, I_B=0	CJD175/76	45		V
			CJD177/78	60		V
			CJD179/80	80		V
Collector Emitter Saturation Voltage	*$V_{CE\ (sat)}$	I_C=1A, I_B=0.1A			0.8	V
Base Emitter on Voltage	*$V_{BE\ (on)}$	I_C=1A, V_{CE}=2V			1.3	V
DC Current Gain	*h_{FE}	I_C=150mA, V_{CE}=2V		40		
		I_C=1A, V_{CE}=2V		15		
	*h_{FE} Group	I_C=150mA, V_{CE}=2V	- 6	40	100	
			- 10	63	160	
		Only CJD175/76/79	- 16	100	250	
Transition Frequency	f_T	I_C=250mA, V_{CE}=10V		3.0		MHz

***Pulse test:- Pulse width=300ms, Duty cycle=1.5%**

CJD175_180Rev110106E

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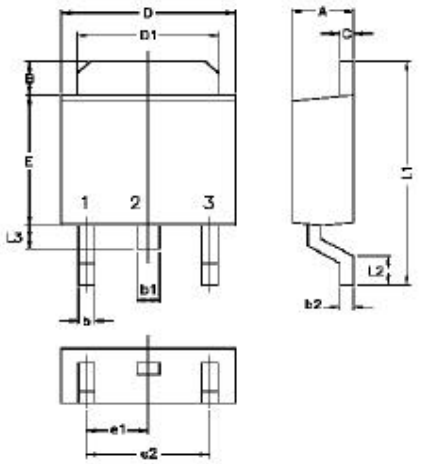
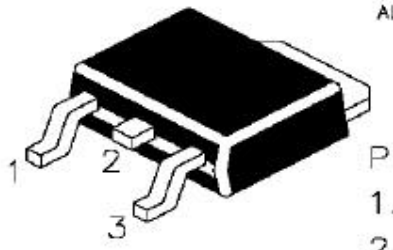
DPAK PACKAGE OUTLINE DIMENSIONS



DIM	MIN.	MAX.
A	2.20	2.40
B	1.30	1.50
b	0.55	0.85
b1	0.75	0.85
b2	0.46	0.56
C	0.46	0.56
D	6.40	6.60
D1	5.20	5.40
E	5.40	5.60
e1	2.25	2.35
e2	4.50	4.70
L1	9.25	9.75
L2	0.5	–
L3	0.90	1.10

ALL DIMENSIONS ARE IN mm



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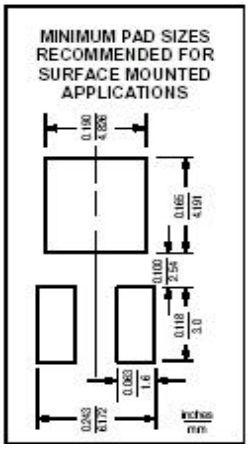
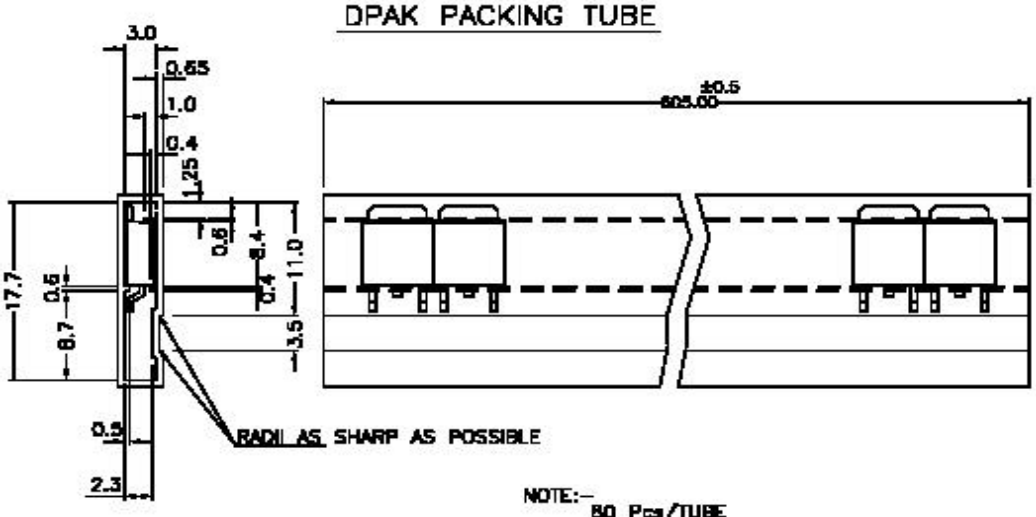


DPAK PACKING TUBE



NOTE:–
80 Pcs/TUBE
2.5 K/REEL
ALL DIMENSIONS ARE IN mm

CJD175_180Rev110106E

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).

Disclaimer

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