

## NPN SILICON PLASTIC HIGH VOLTAGE POWER TRANSISTORS

CJD3439

**DPAK (TO-252)  
Plastic Package**



**PIN CONFIGURATION**  
1. BASE  
2. COLLECTOR  
3. EMITTER

Designed for use in Line Operated Equipment Requiring High  $f_T$

### ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Emitter Voltage	$V_{CEO}$	350	V
Collector Base Voltage	$V_{CBO}$	450	V
Emitter Base Voltage	$V_{EBO}$	5.0	V
Collector Current Continuous	$I_C$	0.3	A
Base Current	$I_B$	150	mA
Total Power Dissipation at $T_c=25^\circ\text{C}$ Derate Above $25^\circ\text{C}$	$P_D$	15 0.12	W W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	$T_j, T_{stg}$	- 65 to +150	$^\circ\text{C}$

### THERMAL CHARACTERISTICS

Junction to Case	$R_{th(j-c)}$	8.33	$^\circ\text{C/W}$
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### ELECTRICAL CHARACTERISTICS ( $T_c=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C=5\text{mA}, I_B=0$	350			V
Collector Cut Off Current	$I_{CEO}$	$V_{CE}=300\text{V}, I_B=0$			20	$\mu\text{A}$
Collector Cut Off Current	$I_{CEX}$	$V_{CE}=450\text{V}, V_{EB(off)}=1.5\text{V}$			500	$\mu\text{A}$
Collector Cut Off Current	$I_{CBO}$	$V_{CB}=350\text{V}, I_E=0$			20	$\mu\text{A}$
Emitter Cut Off Current	$I_{EBO}$	$V_{BE}=5\text{V}, I_C=0$			20	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$I_C=2\text{mA}, V_{CE}=10\text{V}$ $I_C=20\text{mA}, V_{CE}=10\text{V}$	30 15		200	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=50\text{mA}, I_B=4\text{mA}$			0.5	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=50\text{mA}, I_B=4\text{mA}$			1.3	V
Base Emitter On Voltage	$V_{BE(on)}$	$I_C=50\text{mA}, V_{CE}=10\text{V}$			0.8	V

### DYNAMIC CHARACTERISTICS

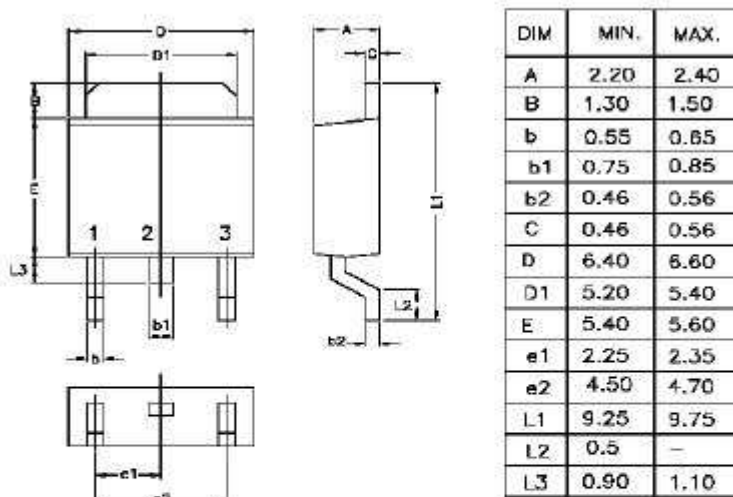
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Current Gain Bandwidth Product	$f_T$	$I_C=10\text{mA}, V_{CE}=10\text{V}, f=5\text{MHz}$	15			MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			10	pF
Small Signal Current Gain	$h_{fe}$	$I_C=5\text{mA}, V_{CE}=10\text{V}, f=1\text{KHz}$	25			

### MARKING

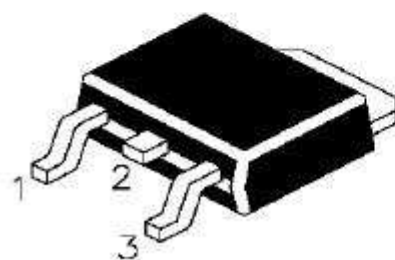
XY= Date Code	<b>CDIL</b> <b>CJD3439</b> <b>XY MX</b>
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# **DPAK (TO-252) Plastic Package**

## **DPAK PACKAGE OUTLINE DIMENSIONS**

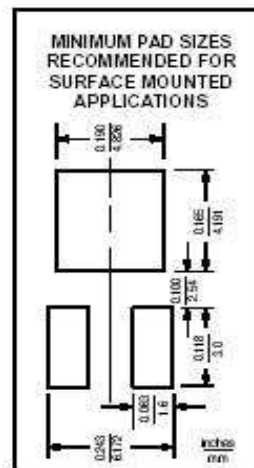


ALL DIMENSIONS ARE IN mm

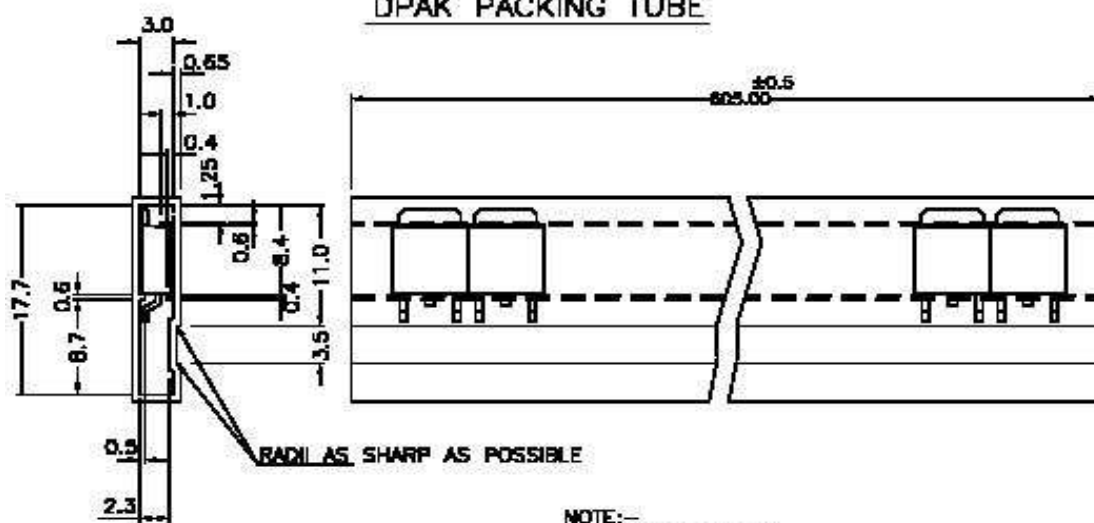


## **PIN CONFIGURATION**

1. BASE
2. COLLECTOR
3. EMITTER

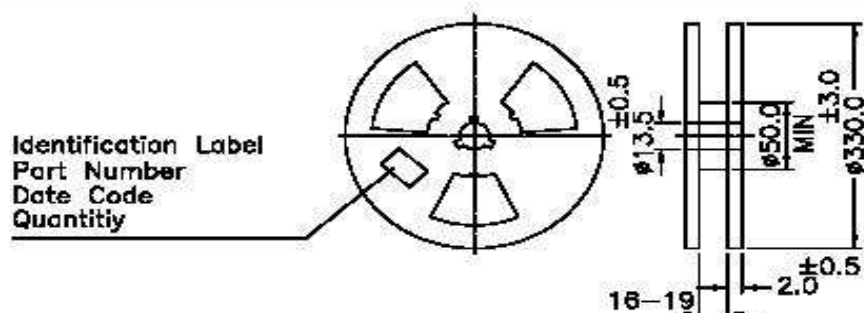


## **DPAK PACKING TUBE**



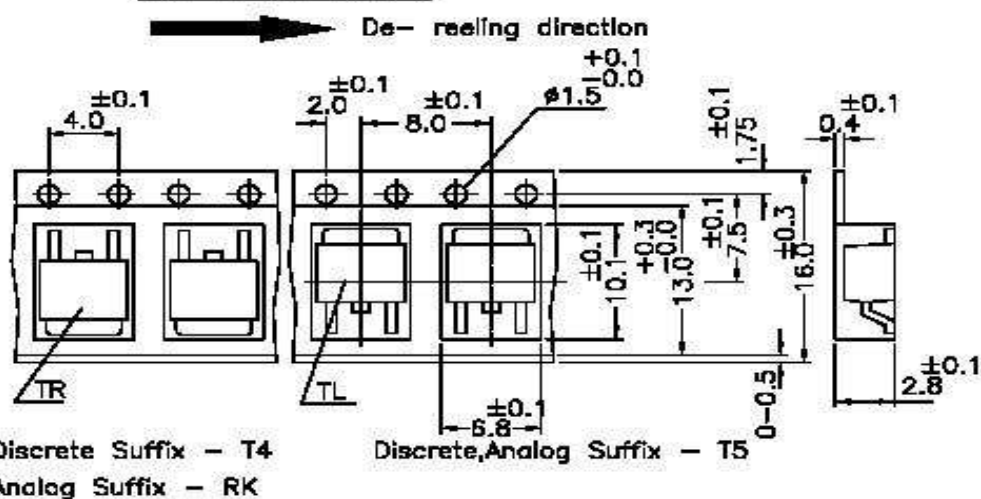
NOTE:—  
80 Pcs/TUBE  
2.5 K/REEL  
ALL DIMENSIONS ARE IN mm

# DPAK TAPE & REEL SPECIFICATION



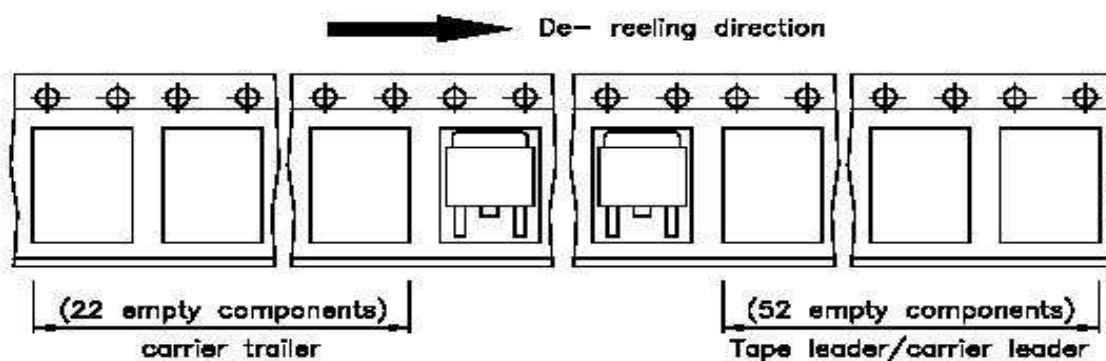
ALL DIMENSIONS ARE IN mm  
REEL  $\phi$  330 mm (13")  
No of Device 2500

## TAPE & REEL



### Notes:-

A maximum of three consecutive components may be missing. Provided this gap is followed by six consecutive components.



**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**

The product information and the selection guides facilitate selection of the CDIL's 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 in the Data Sheet and 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 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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