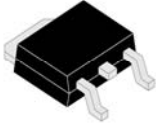


HIGH VOLTAGE PLASTIC POWER TRANSISTORS

MJD340 NPN
MJD350 PNP



TO-252 (DPAK)

TO-252 DPAK
Leaded Plastic Package
RoHS compliant

APPLICATION: Designed for Line Operated Audio output Amplifier, Switchmode Power Supply Drivers and other Switching Applications.

ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C Unless otherwise specified)

PARAMETER	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	300	V
Collector Emitter Voltage	V_{CEO}	300	V
Emitter Base Voltage	V_{EBO}	3.0	V
Collector Current Continuous	I_C	0.5	A
Collector Current Peak	I_C	0.75	A
Collector Current Peak $T_c=25^\circ\text{C}$	P_D	15	W
Derate Above 25°C		0.12	W/°C
Total Power Dissipation $T_a=25^\circ\text{C}$	P_D	1.56	W
Derate Above 25°C		0.0	W/°C
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-65 to +150	°C

THERMAL CHARACTERISTICS

Junction to Case	$R_{th(j-c)}$	8,33	°C/W
Junction to Ambient	$R_{th(j-a)}^1$	80	°C/W
Lead Temperature for Soldering Purpose	T_L	260	°C



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ELECTRICAL CHARACTERISTICS at (Ta = 25 °C Unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Emitter Sustaining Voltage	$V_{CEO(sus)}^2$	$I_C=1mA, I_B=0$	300			V
Collector Cut Off Current	I_{CBO}	$V_{CB}=300V, I_E=0$			0.1	mA
Emitter Cut Off Current	I_{EBO}	$V_{EB}=3V, I_C=0$			0.1	mA
DC Current Gain	h_{FE}	$I_C=50mA, V_{CE}=10V$	30		240	

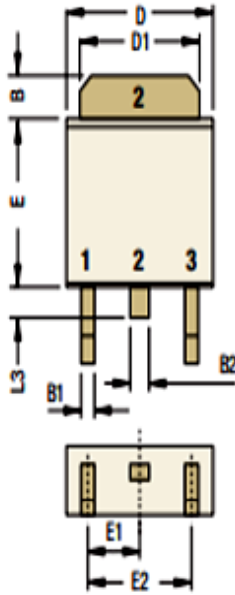
MARKING	CDIL	CDIL
	MJD340	MJD350
	XY	XY
XY= Date Code		

Note:

1. When Surface Mounted ON Minimum Pad Size Recommended
2. Pulse test: Pulse width $\leq 300ms$, duty cycle $\leq 2\%$

PACKAGE DETAILS

TO-252 DPAK Leaded Plastic Package



DIM	Min	Max
A	2.18	2.43
B	0.889	1.500
B1	0.550	0.889
B2	0.75	0.85
B3	0.46	0.56
C	0.46	0.56
D	6.35	6.75

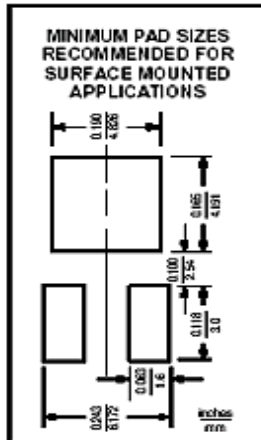
DIM	Min	Max
D1	4.95	5.46
E	5.40	6.22
E1	2.25	2.35
E2	4.50	4.70
L1	9.25	9.75
L2	0.50	—
L3	0.90	1.10

Pin Configuration

Pin 1: Base

Pin 2: Collector

Pin 3: Emitter



Packaging Specification

T & A: Tape and Ammo Pack; T & R: Tape and Reel; Bulk: Loose in Poly Bags; Tube: Tube and Carton; K: 1,000

Package / Case Type	Packaging Type	Std. Packaging			Inner Carton		Outer Carton	
		Qty	Qty	Qty	Size L x W x H (cm)	Gross Weight (Kg)	Qty	Size L x W x H (cm)
TO-252 (DPAK)	Tube	1,600 (80pcs/tube)	4K	56 x 14 x 7	2.2	36K	57 x 38 x 16	20.6
	T & R	2,500	2.5K	33 x 33 x 2.5	1.3	20K	34 x 270 x 36	10.2

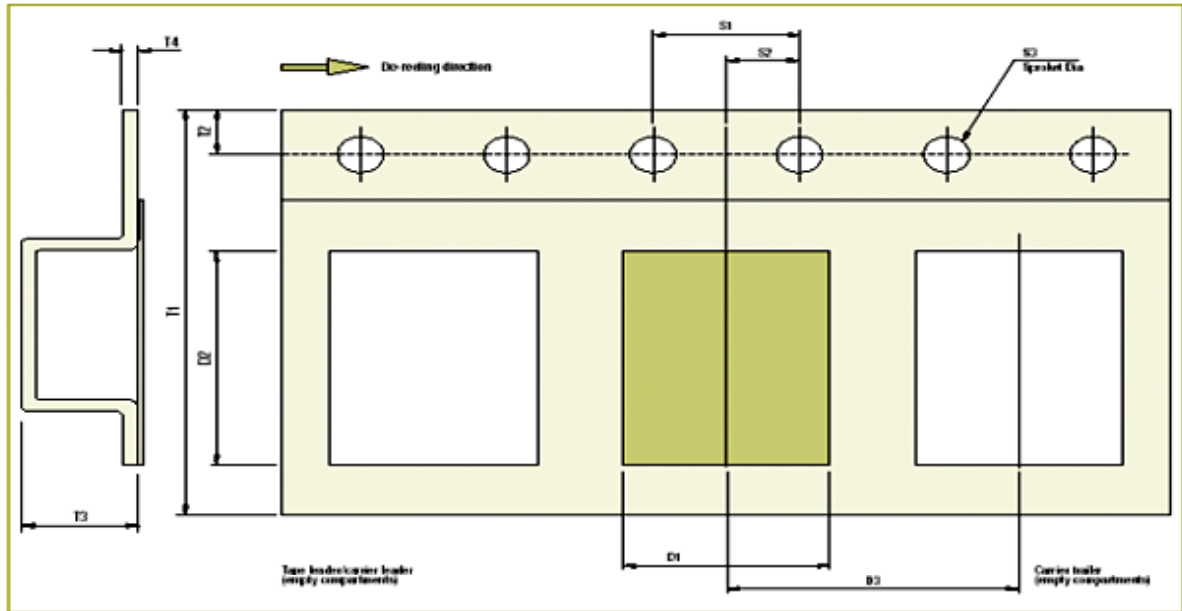


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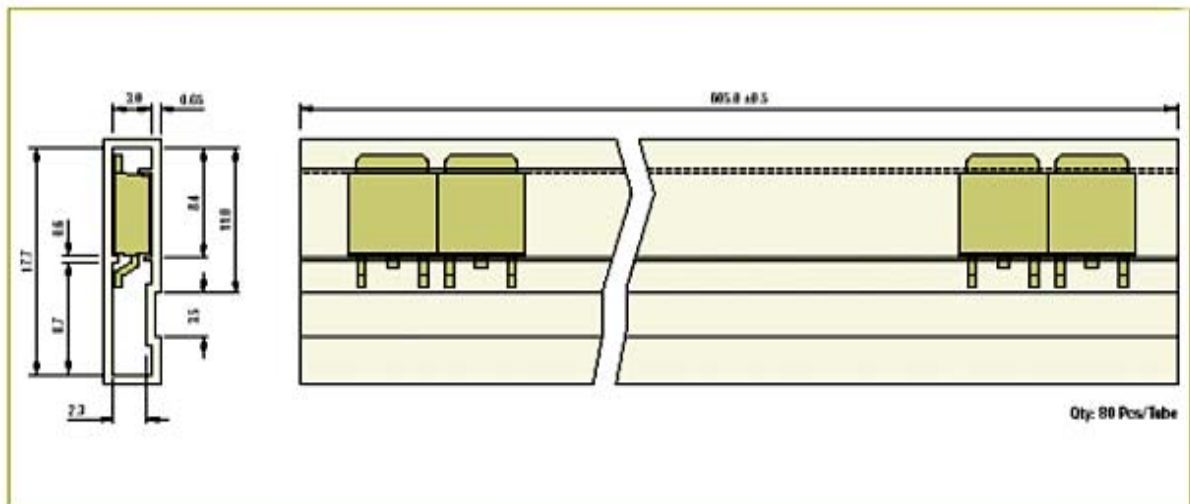
Packaging Tape Specification for SMD Packages



SMD Tape Specifications (16-24mm)

Device	D1	D2	D3	T1	T2	T3	T4	S1	S2	S3
						Max	Max			Dia
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
TO-252 (DPAK)	6.8±0.1	18.1±0.1	8.0±0.1	16.9±0.2	1.75±0.1	2.80	0.35	4.0±0.1	2.0±0.1	1.5±0.1

TO-252 DPAK Packaging Tube





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Recommended Product Storage Environment for Discrete Semiconductor Devices

This storage environment assumes that the Diodes and transistors are packed properly inside the original packing supplied by CDIL.

- Temperature 5 °C to 30 °C
- Humidity between 40 to 70 %RH
- Air should be clean.
- Avoid harmful gas or dust.
- Avoid outdoor exposure or storage in areas subject to rain or water spraying .
- Avoid storage in areas subject to corrosive gas or dust. Product shall not be stored in areas exposed to direct sunlight.
- Avoid rapid change of temperature.
- Avoid condensation.
- Mechanical stress such as vibration and impact shall be avoided.
- The product shall not be placed directly on the floor.
- The product shall be stored on a plane area. They should not be turned upside down. They should not be placed against the wall.

Shelf Life of CDIL Products

The shelf life of products is the period from product manufacture to shipment to customers. The product can be unconditionally shipped within this period. The period is defined as 2 years.

If products are stored longer than the shelf life of 2 years the products shall be subjected to quality check as per CDIL quality procedure.

The products are further warranted for another one year after the date of shipment subject to the above conditions in CDIL original packing.

Floor Life of CDIL Products and MSL Level

When the products are opened from the original packing, the floor life will start.

For this, the following JEDEC table may be referred:

JEDEC MSL Level		
Level	Time	Condition
1	Unlimited	≤30 °C / 85% RH
2	1 Year	≤30 °C / 60% RH
2a	4 Weeks	≤30 °C / 60% RH
3	168 Hours	≤30 °C / 60% RH
4	72 Hours	≤30 °C / 60% RH
5	48 Hours	≤30 °C / 60% RH
5a	24 Hours	≤30 °C / 60% RH
6	Time on Label(TOL)	≤30 °C / 60% RH



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Customer Notes

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).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



CDIL is a registered trademark of

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CIN No. U32109DL1964PTC004291