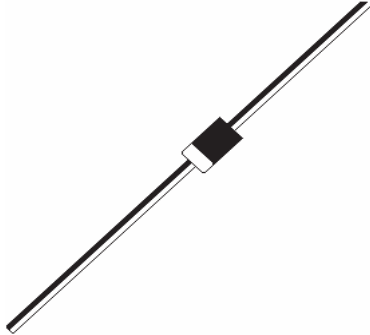


**GENERAL PURPOSE PLASTIC SILICON RECTIFIER**

**EM513 - EM518**

**DO-41P  
Axial Plastic Package**



**ABSOLUTE MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS:**

(Ratings at  $T_a = 25^\circ\text{C}$  unless specified otherwise, single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%)

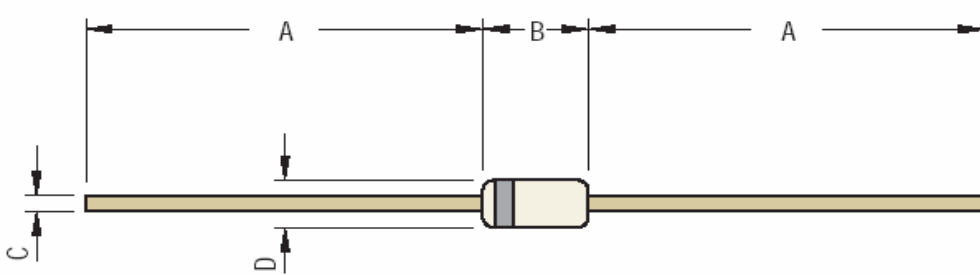
| Description  | Symbols         | EM513       | EM516 | EM518 | Units              |
|--|-----------------|-------------|-------|-------|--------------------|
| Maximum Peak repetitive reverse voltage  | $V_{RRM}$       | 1600        | 1800  | 2000  | Volts              |
| Maximum RMS Voltage  | $V_{RMS}$       | 1120        | 1260  | 1400  | Volts              |
| Maximum DC Blocking Voltage  | $V_{DC}$        | 1600        | 1800  | 2000  | Volts              |
| Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead Length at $T_L=75^\circ\text{C}$         | $I_{(AV)}$      | 1.0         |       |       | Amp                |
| Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)      | $I_{FSM}$       | 30          |       |       | Amp                |
| Maximum Forward Voltage at 1.0A and $25^\circ\text{C}$   | $V_F$           | 1.1         |       |       | Volts              |
| Maximum Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$<br>$T_A=100^\circ\text{C}$ | $I_R$           | 5.0<br>500  |       |       | $\mu\text{Amp}$    |
| Typical Junction Capacitance (Note 1)  | $C_j$           | 15          |       |       | pF                 |
| Typical Thermal Resistance (Note 2)  | $R_{\theta JA}$ | 50          |       |       | $^\circ\text{C/W}$ |
| Operating Junction Temperature Range   | $T_j$           | -55 to +150 |       |       | $^\circ\text{C}$   |
| Storage Temperature Range  | $T_{stg}$       | -55 to +150 |       |       | $^\circ\text{C}$   |

**NOTES:**

1. Measured at 1 MHz and applied reverse voltage of 4.0  $V_{DC}$ .
2. Thermal resistance from Junction to Ambient 0.375" (9.5mm) lead length PCB Mounted

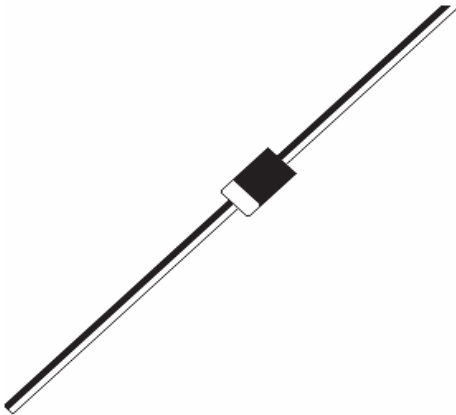
EM51\_8Rev310506D

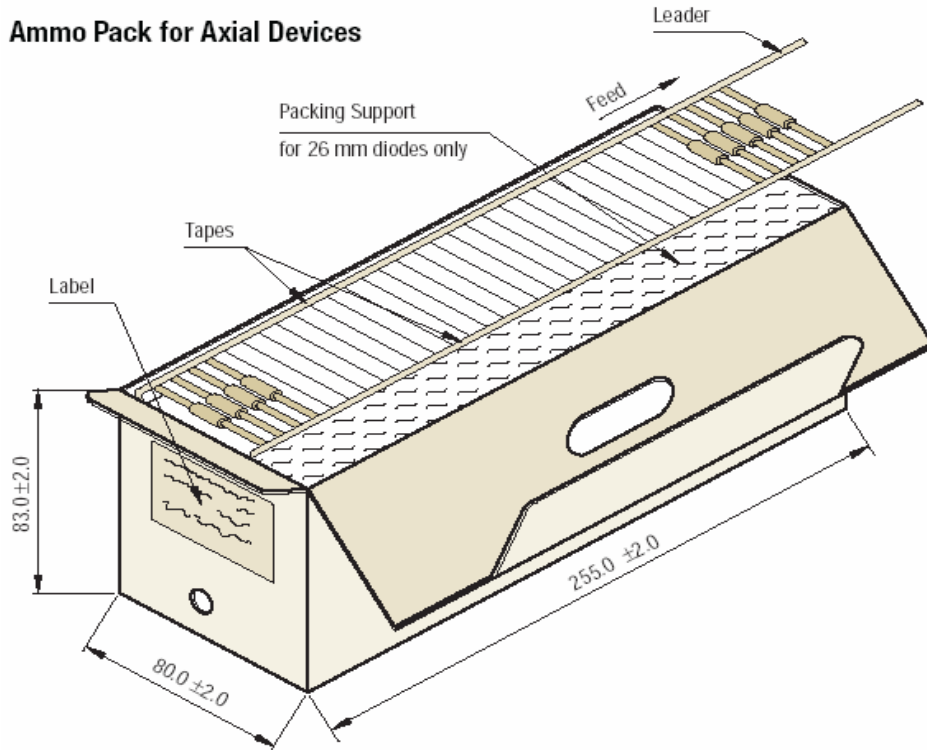
DO-41P Axial Plastic Package



| DIM | Min   | Max  |
|-----|-------|------|
| A   | 25.40 |      |
| B   | 4.20  | 5.20 |
| C   | 0.70  | 0.90 |
| D   | 2.00  | 2.70 |

All Dimensions are in mm



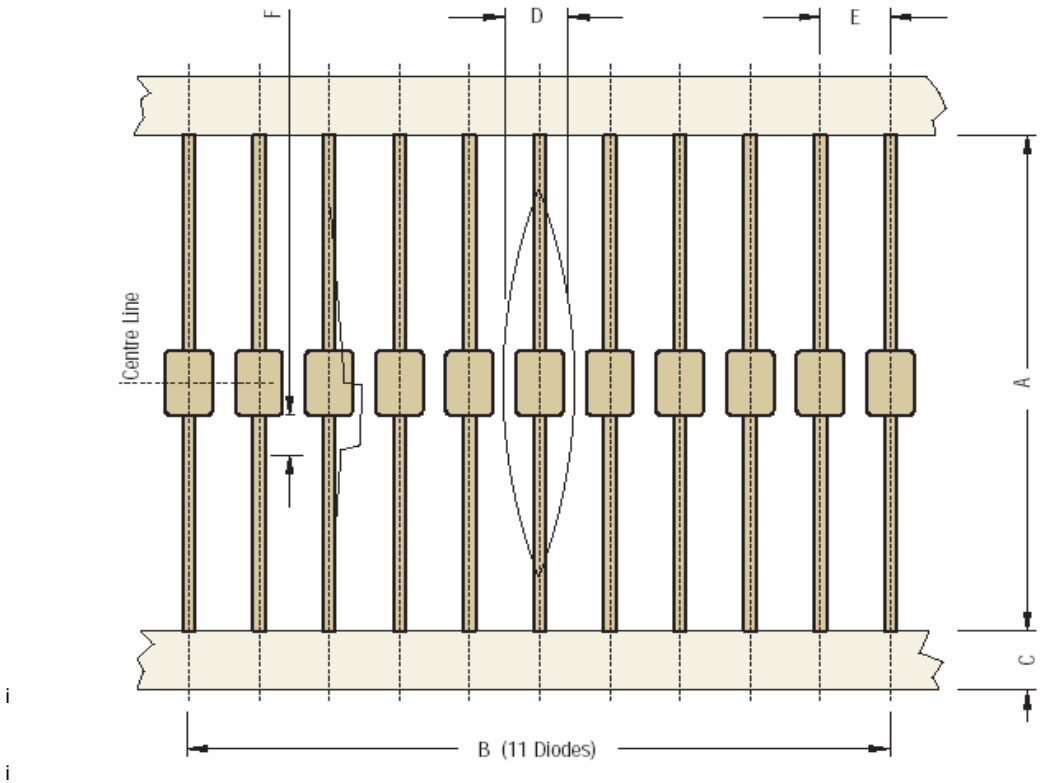


All Dimensions are in mm

**Packaging Information**

| Package/<br>Case Type | Packaging Type | Std. Packing Qty | Inner Carton |                     |                   | Outer Carton |                     |                   |
|-----------------------|----------------|------------------|--------------|---------------------|-------------------|--------------|---------------------|-------------------|
|                       |                |                  | Qty          | Size L x W x H (cm) | Gross Weight (Kg) | Qty          | Size L x W x H (cm) | Gross Weight (Kg) |
| DO-41P                | T&A            | 5,000            | 5K           | 27 x 8 x 14         | 1.96              | 45K          | 46 x 35 x 25        | 17.5              |

T & A: Tape and Ammo Pack



| DO-41P 52 mm Tape |      |       |
|-------------------|------|-------|
| DIM               | Min  | Max   |
| A                 | 50.0 | 54.0  |
| B                 | 95.0 | 105.0 |
| C                 | 5.60 | 6.50  |
| D                 |      | 1.5R  |
| E                 | 9.50 | 10.50 |
| F                 |      | 1.25  |

All Dimensions are in mm

**TAPE SPECIFICATIONS**

1. 300 mm (Min) leader tape on every roll.
2. No. of empty places allowed 0.25% without consecutive empty places.
3. Ends of leads shall normally not protrude beyond the tapes.
4. Components shall be held sufficiently in the tape or tapes so that they can not come free in normal handling.

**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).

**Customer Notes**

**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 Discrete 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  
**Continental Device India Limited**

C-120 Naraina Industrial Area, New Delhi 110 028, India.  
Telephone + 91-11-2579 6150, 4141 1112 Fax + 91-11-2579 5290, 4141 1119  
email@cdil.com www.cdilsemi.com

EM51\_8Rev310506D