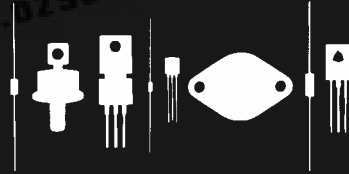


Central Semiconductor Corp.
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145 Adams Avenue
Hauppauge, New York 11788



CMCL1300 THRU CMCL1304

CURRENT LIMITING DIODE

JEDEC DO-35 CASE

FEATURES

- LOW COST
- HIGH RELIABILITY
- SMALLER CASE SIZE THAN COMPETITION
- SPECIAL SELECTIONS AVAILABLE
- SUPERIOR LOT TO LOT CONSISTENCY
- SURFACE MOUNT DEVICES AVAILABLE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CMCL1300 series types are silicon field effect current regulator diodes designed for applications requiring a constant current over a wide voltage range. These devices are manufactured in the cost effective DO-35 double plug case which provides many benefits to the user including space savings and improved thermal characteristics. Special selections of I_p (regulator current) are available for critical applications. This series is a direct replacement for MCL1300 through MCL1304 types, respectively. Lower cost units are available in the CCL0035 series.

MAXIMUM RATINGS ($T_L = 75^\circ\text{C}$)

Peak Operating Voltage

Power Dissipation

Operating and Storage Junction Temperature

SYMBOL

POV

P_D

T_J, T_{STG}

100

600

-65 TO +200

UNIT

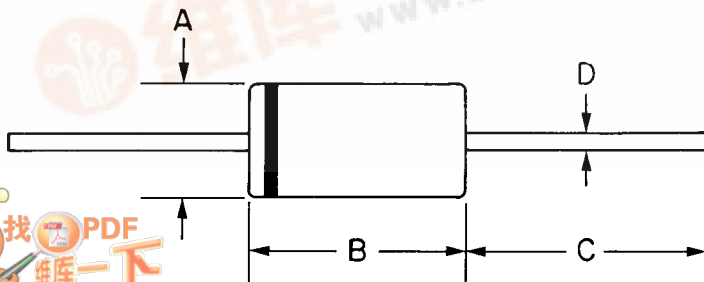
V

mW

$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

| TYPE NO. | REGULATOR CURRENT | | | DYNAMIC IMPEDANCE | KNEE IMPEDANCE | LIMITING VOLTAGE |
|----------|--------------------------|------|------|--------------------------|---------------------------|-----------------------------------|
| | $I_p @ V_T = 25\text{V}$ | | | $Z_T @ V_T = 25\text{V}$ | $Z_K @ V_K = 6.0\text{V}$ | $V_L @ I_L = 0.8 I_p \text{ MIN}$ |
| | mA | | | M Ω | M Ω | V |
| | MIN | NOM | MAX | MIN | MIN | MAX |
| CMCL1300 | 0.20 | 0.50 | 0.80 | 4.00 | 0.50 | 1.0 |
| CMCL1301 | 0.40 | 1.00 | 1.60 | 0.80 | 0.20 | 1.5 |
| CMCL1302 | 1.40 | 2.00 | 2.60 | 0.40 | 0.10 | 2.0 |
| CMCL1303 | 2.40 | 3.00 | 3.60 | 0.30 | 0.05 | 2.0 |
| CMCL1304 | 3.40 | 4.00 | 4.60 | 0.25 | 0.025 | 2.5 |



| | INCHES | | MILLIMETERS | |
|-----|--------|------|-------------|------|
| DIM | MIN | MAX | MIN | MAX |
| A | .060 | .080 | 1.52 | 2.03 |
| B | .140 | .160 | 3.60 | 4.10 |
| C | 1.0 | — | 25.4 | — |
| D | .018 | .022 | 0.46 | 0.56 |