Micro Commercial Components

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20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

# RL101 THRU RL107

## 1 Amp Rectifier 50 - 1000 Volts

## Features

- Halogen free available upon request by adding suffix "-HF"
- Low Current Leakage
- Metalurgically Bonded Construction
- Low Cost
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/Rohs Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)

## Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 50°C/W Junction To Lead

| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|---|---|---|---|---|
| RL101 | RL101 | 50V | 35V | 50V |
| RL102 | RL102 | 100V | 70V | 100V |
| RL103 | RL103 | 200V | 140V | 200V |
| RL104 | RL104 | 400V | 280V | 400V |
| RL105 | RL105 | 600V | 420V | 600V |
| RL106 | RL106 | 800V | 560V | 800V |
| RL107 | RL107 | 1000V | 700V | 1000V |

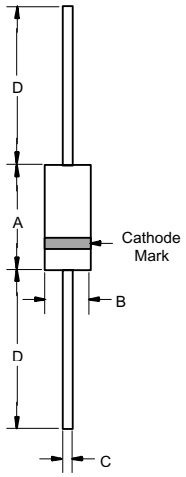
## Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|---|---|---|
| Average Forward Current | $I_{F(AV)}$ | 1.0A | $T_A$ = 75°C |
| Peak Forward Surge Current | $I_{FSM}$ | 30A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage | $V_F$ | 1.1V | $I_{FM}$ = 1.0A; $T_J$ = 25°C* |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$ | 5.0µA<br>50µA | $T_J$ = 25°C<br>$T_J$ = 125°C |
| Typical Junction Capacitance | $C_J$ | 15pF | Measured at 1.0MHz, $V_R$=4.0V |

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

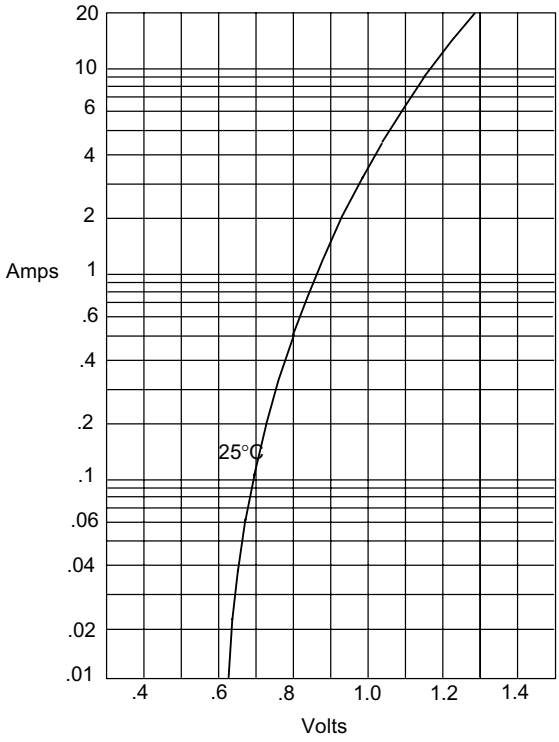
Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

A-405



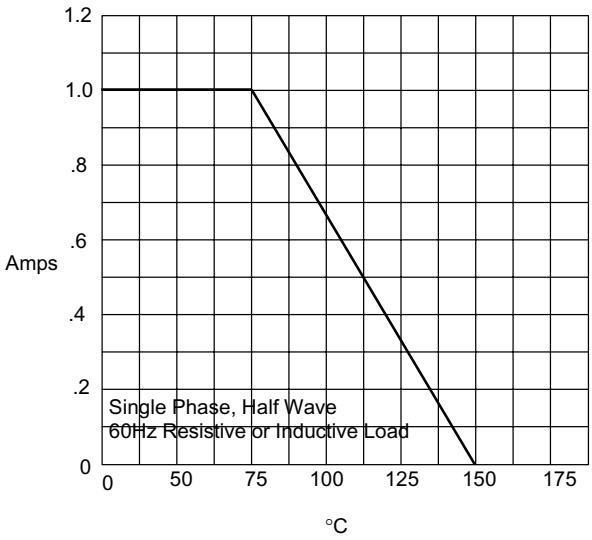

| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| | INCHES | | MM | | |
| DIM | MIN | MAX | MIN | MAX | NOTE |
| A | .166 | .205 | 4.10 | 5.20 | |
| B | .080 | .107 | 2.00 | 2.70 | |
| C | --- | .024 | --- | .60 | |
| D | 1.000 | --- | 25.40 | --- | |

Figure 1
Typical Forward Characteristics



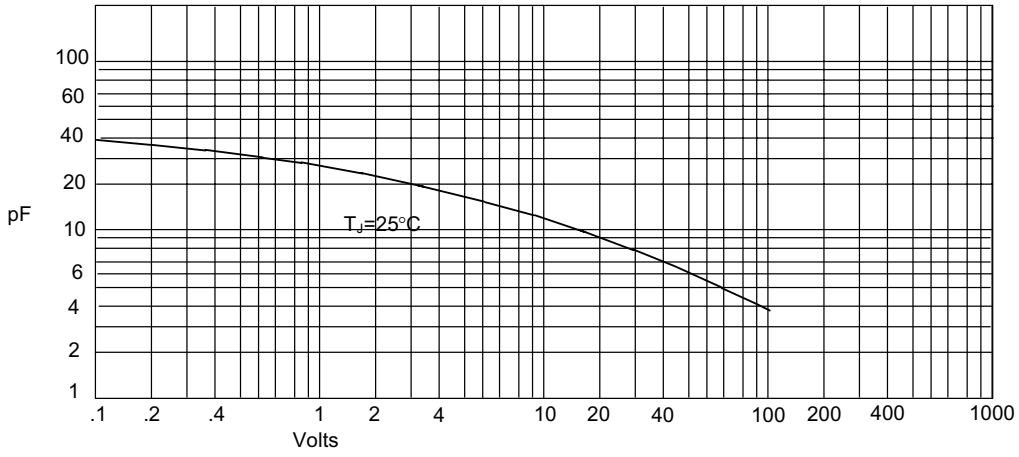

Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



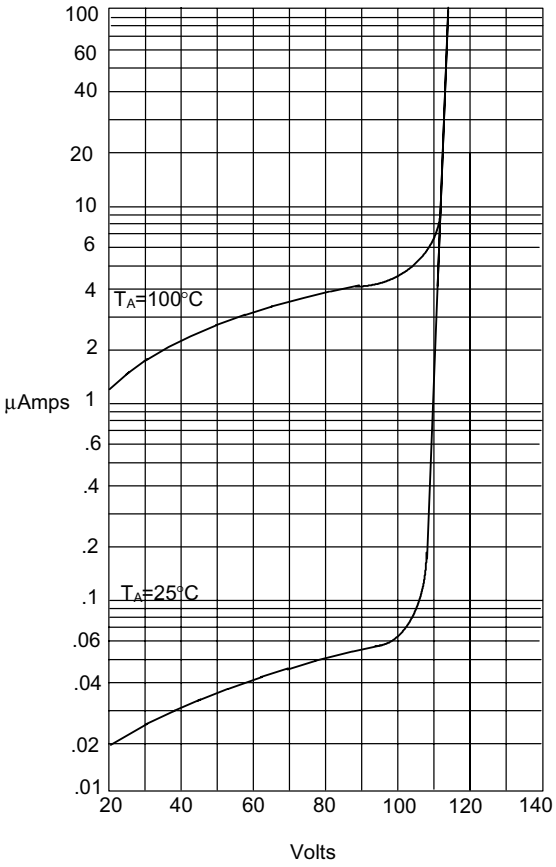

Average Forward Rectified Current - Amperes *versus*
Ambient Temperature -°C

Figure 3
Junction Capacitance



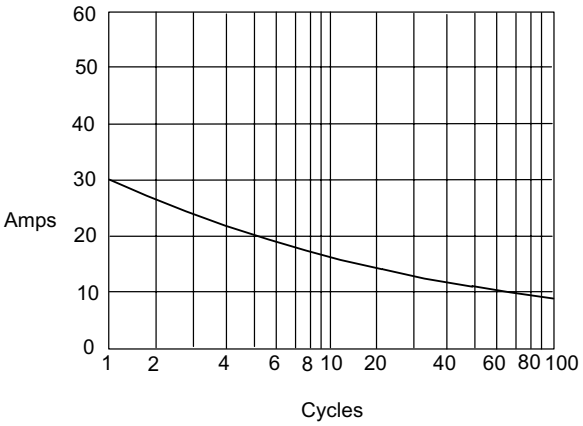

Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics




Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current




Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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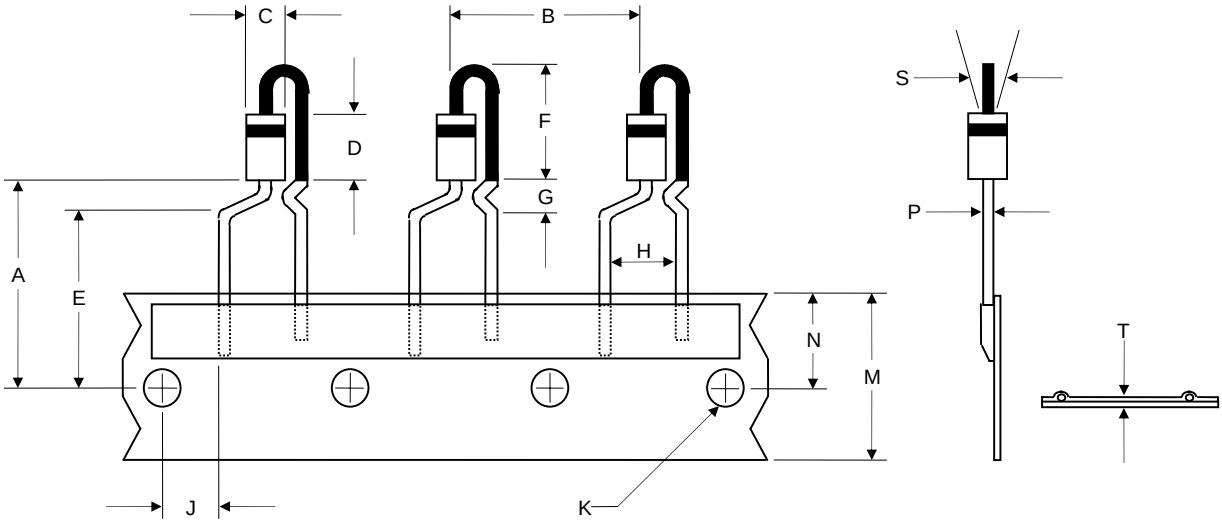
# RADIAL TAPING SPECIFICATIONS FOR RECTIFIERS

## A-405 Outline Only




| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| | INCHES | | MM | | |
| DIM | MIN | MAX | MIN | MAX | NOTE |
| A | .709 | .748 | 18.0 | 20.0 | |
| B | .460 | .540 | 11.7 | 13.7 | |
| C | --- | .106 | --- | 2.7 | |
| D | --- | .205 | --- | 5.2 | |
| E | .610 | .650 | 15.5 | 16.5 | |
| F | --- | .354 | --- | 9.0 | |
| G | --- | .177 | --- | 4.5 | |
| H | .177 | .217 | 4.5 | 5.5 | |
| J | .124 | .179 | 3.15 | 4.55 | |
| K | .146 | .169 | 3.7 | 4.3 | |
| M | .677 | .748 | 17.2 | 19.0 | |
| N | .343 | .384 | 8.70 | 9.75 | |
| P | .021 | .025 | .54 | .64 | |
| S | --- | ±.079 | --- | ±2.0 | |
| T | .016 | .031 | . 4 | .8 | |

PACKING METHODS

P/N EXAMPLE: A=N:PANASERT
A B C

B = 0: NON INSULATION COATING---
LEAD FIRST OUT.
1: INSULATION COATING---
LEAD FIRST OUT.
2: NON INSULATION COATING---
BODY FIRST OUT.
3: INSULATION COATING---
BODY FIRST OUT.

C = 1: FOR CATHODE DOWN,
IN BULK.
2: FOR CATHODE UP,
IN BULK.
3: FOR CATHODE DOWN,
IN REEL.
4: FOR CATHODE UP,
IN REEL

## Ordering Information :

| Device | Packing |
|---|---|
| Part Number-TP | Tape&Reel: 5Kpcs/Reel |
| RL104-A-B-C-AP(See page 4 for A/B/C suffix details) | Ammo Packing: 2Kpcs/Ammo Box |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF