

Major ratings and characteristics

| Characteristics | s Values | |
|---|-------------|------------|
| I _{F(AV)} Rectangular Waveform | 3 | Α |
| V_{RRM} | 300 | V |
| V _F @ 3 A , Tj=125°C | 0.79 | V , typ. |
| T _J Operating Junction Temperature | -65 to +150 | $^{\circ}$ |

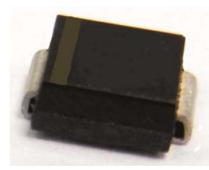
Features

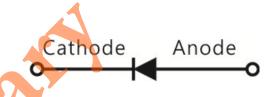
- * Low Forward Voltage Drop
- * Reliable High Temperature Operation
- * Softest, fast switching capability
- * 150°C Operating Junction Temperature
- * Lead Free Finish, RoHS Compliant

Typical Applications

Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications

DO-214AA(SMB)





Mechanical

* Case: DO-214AA(SMB)

* Molder Plastic: UL Flammability Classification Rating 94V-0

* Device Weight: 0.003 ounces (0.093grams)

Maximum Ratings Characteristics (T_A = 25°C unless otherwise specified)

| Parameter | Symbol | | Units |
|---|------------------|--------------|--------|
| DC Blocking Voltage | V_{RM} | | |
| Working Peak Reverse Voltage | V_{RWM} | 300 | Volts |
| Peak Repetitive Reverse Voltage | V_{RRM} | | |
| Average Rectified Forward Current | | | A |
| (Rated VR-20Khz Square Wave) - 50% duty cycle | l _o | 3 | Amps |
| Peak Forward Surge Current - 1/2 60hz | I _{FSM} | 60 | Amps |
| Peak Repetitive Reverse Surge Current (2uS-1Khz) | I _{RRM} | 2 | Amps |
| Typical Thermal Resistance | Rθ _{JL} | 20 | °C / W |
| Maximum Rate of Voltage Change (at Rated V_R) | dv/dt | 10000 | V/uS |
| Operating Junction Temperature | T _J | - 65 to +150 | °C |
| Storage Junction Temperature | T _{STG} | - 65 to +150 | |

| Electrical Characteristics - (per leg) $(T_A = 25)$ | 5°C unless otherwise specified) |
|---|---------------------------------|
|---|---------------------------------|

| Parameter | Test Co | nditions | Symbol | Тур. | Max. | Units |
|--|---|------------------------|---------|------|-------|-------|
| Instantaneous Forward Voltage | Forward Voltage $IF = 3 A$ $T_J = 25^{\circ}C$ $T_J = 125^{\circ}C$ | \/ * | | 0.92 | Volts | |
| Ilistantaneous Forward voltage | | T _J = 125°C | V_{F} | 0.79 | 0.83 | VOILS |
| Instantaneous Reverse Current At V _{RM} | A4 \/ | T _J = 25°C | IR | | 200 | uA |
| | AL VRM | T _J = 125°C | | | 20 | mA |

^{*} Pulse width < 300 uS, Duty cycle < 2%

Patings and Characteristics Curves

($T_A = 25$ °C unless otherwise specified)

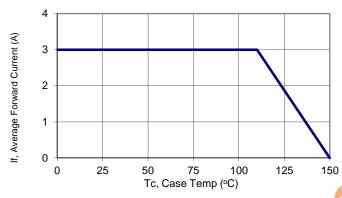


Figure 1: Current Derating, Case

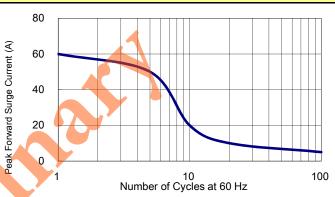


Figure 2: Maximum Repetitive Surge Current

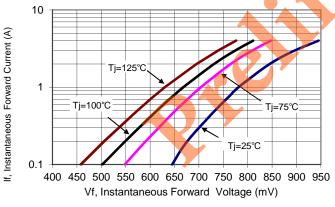


Figure 3: Typical Reverse Current

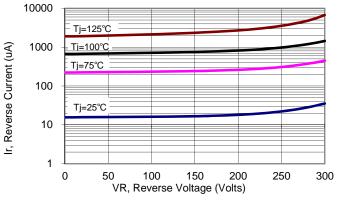


Figure 4: Typical Forward Voltage

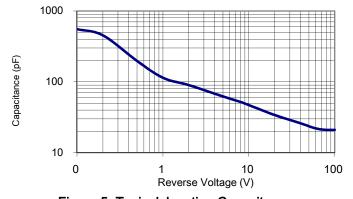
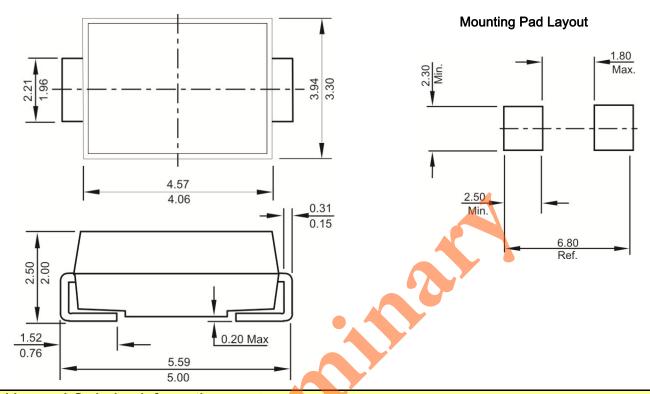
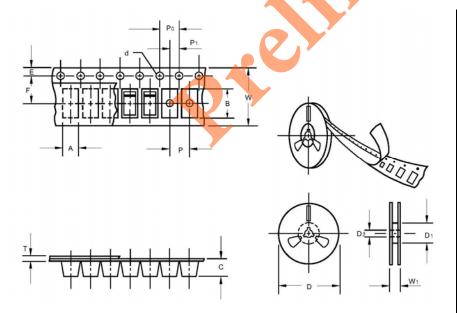


Figure 5: Typical Junction Capacitance

Package and Suggested Mounting pad Outline Dimensions millimeters



Packing and Ordering information



| Item | Symbol | Dimension |
|-----------------------|--------|-----------|
| Carrier width | Α | 3.77±0.10 |
| Carrier length | В | 5.7±0.10 |
| Carrier depth | С | 2.45±0.10 |
| Sprocket hole | d | 1.55±0.10 |
| Reel outside diameter | D | 330.0±1.0 |
| Reel inner diameter | D1 | 75±1.0 |
| Feed hole diameter | D2 | 13.5±1.0 |
| Stocket hole position | E | 1.75±0.10 |
| Punch hole position | F | 5.5±0.05 |
| Punch hole pitch | Р | 8.0±0.10 |
| Sprocket hole pitch | P0 | 4.0±0.10 |
| Embossment center | P1 | 2.0±0.10 |
| Totall tape thickness | T | 0.25±0.10 |
| Tape width | W | 12.0±0.15 |
| Reel width | W1 | 18.1±1.5 |

Ordering information

| Part Number | Package | Base Quantity | Delivery mode |
|-------------|------------------|---------------|------------------------------------|
| P3L300B | DO-214AA (SMB) | 3000 | 13" diameter plastic tape and reel |

Note: For Halogen Free molding compound, add "H" suffix to part number above.

Marking information



P3L300B = Product Type Marking Code

A = Assembly code

YM = Date Code

Y = Last one digits of year

M = Month Code

H = Halogen Free (N/A = common molding compound)



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