

II. Schottky Rectifier

5.0A Surface Mount Schottky Rectifier S52~S520

(Package: SMA (DO-214AC))

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| <p><u>FEATURES</u></p> <ul style="list-style-type: none"> • For surface mounted applications • Low profile leakage • Built-in strain relief • Easy pick and place • Plastic material used carries Underwriters Laboratory Classification 94V-0 • Extremely low VF • Majority carrier conduction • High temperature soldering : 260°C/10 seconds at terminals <p><u>MECHANICAL DATA</u></p> <ul style="list-style-type: none"> • Case : DO-214AC molded plastic • Epoxy : UL 94V-0 rate flame retardant • Lead : Pure tin plated, lead free | <p>Case: SMA Dimensions in inches and (millimetres)</p> |
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Ratings & Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Characteristics | Symbol | S52 | S53 | S54 | S55 | S56 | S58 | S510 | S515 | S520 | Units |
|--|-----------|-------------|-----|-----|------|-----|-------------|------|------|------|-------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | Volts |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | 140 | Volts |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | Volts |
| Maximum average forward rectified current | I_o | 5.0 | | | | | | | | | Amps |
| Non-repetitive peak forward surge current 8.3ms single half sine-wave | I_{FSM} | 125.0 | | | | | | | | | Amps |
| Maximum forward voltage at 5.0A | V_F | 0.55 | | | 0.70 | | 0.85 | 0.92 | 0.95 | | Volts |
| Maximum reverse current $T_a = 25^\circ\text{C}$ $T_a = 100^\circ\text{C}$ | I_R | 0.5 | | | | | 0.1 | | | | mA |
| | | 20.0 | | | | | 10.0 | | | | |
| Typical thermal resistance (Note 1) | Rth-JA | 105 | | | | | | | | | °C/w |
| | Rth-JL | 35 | | | | | | | | | |
| Typical junction capacitance $V_R = 4.0\text{V}$, $f = 1\text{MHz}$ | C_j | 300 | | | | | | | | | PF |
| Operating junction temperature range | T_j | -55 to +125 | | | | | -55 to +150 | | | | °C |
| Storage temperature range | T_{stg} | -55 to +150 | | | | | | | | | °C |

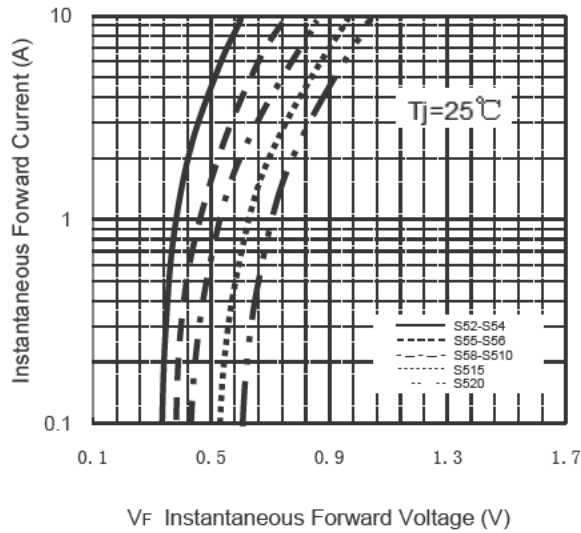
Notes:

1. Thermal resistance from junction to ambient, PCB mounted.

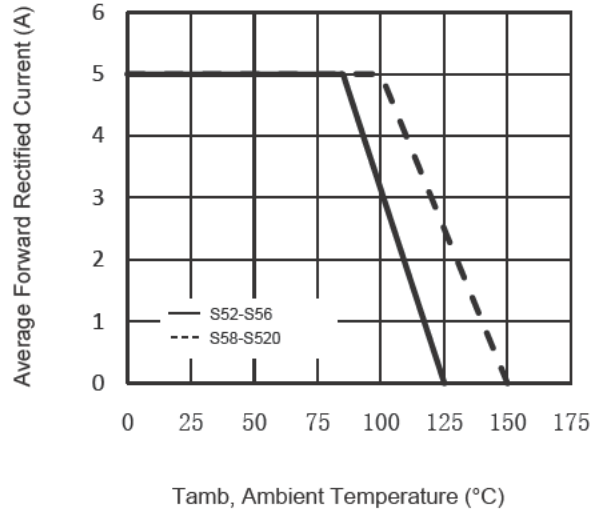
<http://patron-components.com/>

Ratings and Characteristic Curves of S52~S520

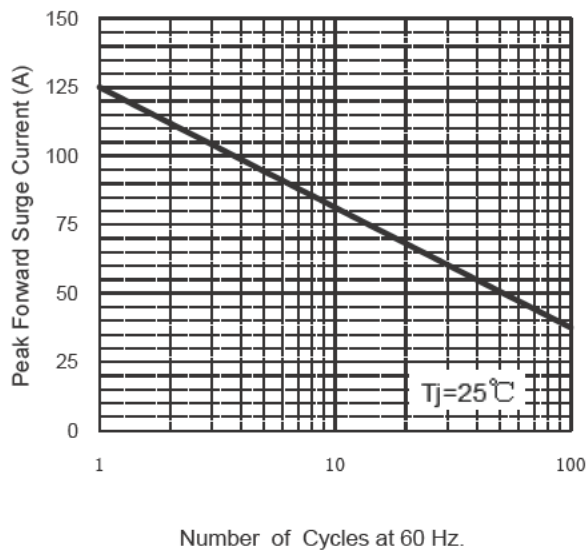
TYPICAL FORWARD CHARACTERISTICS



FORWARD CURRENT DERATING CURVE



**MAXIMUM NON REPETITIVE
PEAK FORWARD SURGE CURRENT**



TYPICAL REVERSE CHARACTERISTICS

