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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# S10AL THRU S10ML

10 Amp Surface Mount Glass Passivated Rectifier 50 - 1000 Volts

## **Features**

- Lead Free Finish/Rohs Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)
- Glass Passivated Chip
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Maximum Thermal Resistance; 18°C/W Junction To Lead
- Halogen free available upon request by adding suffix "-HF"

### **Maximum Ratings**

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Typical Thermal Resistance: 17°C/W Junction to Case

47°C/W Junction to Ambient 13°C/W Junction to Lead

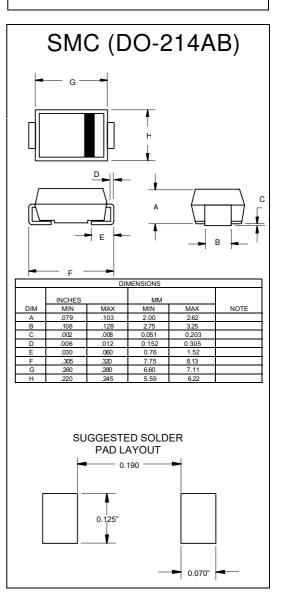
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
S10AL	S10AL	50V	35V	50V
S10BL	S10BL	100V	70V	100V
S10DL	S10DL	200V	140V	200V
S10GL	S10GL	400V	280V	400V
S10JL	S10JL	600V	420V	600V
S10KL	S10KL	800V	560V	800V
S10ML	S10ML	1000V	700V	1000V

#### Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	I <sub>F(AV)</sub>	10.0A	T <sub>C</sub> = 75°C
Peak Forward Surge Current	I <sub>FSM</sub>	200A	8.3ms, half sine
I <sup>2</sup> t Rating for fusing	l <sup>2</sup> t	166A <sup>2</sup> S	(t<8.3ms)
Maximum Instantaneous Forward Voltage	V <sub>F</sub>	1.20V	I <sub>FM</sub> = 10.0A; T <sub>J</sub> = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I <sub>R</sub>	10μΑ	T <sub>J</sub> = 25°C

\*Pulse test: Pulse width 200 µsec, Duty cycle 2%

Note1: High Temperature Solder Exemptions Applied, see EU Directive Annex 7.



### S10AL thru S10ML



Figure 1 Typical Forward Characteristics

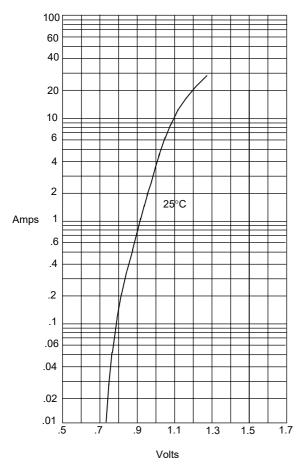
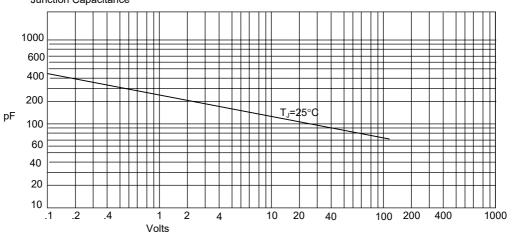


Figure 2 Forward Derating Curve 10 8 6 Amps 4 2 Single Phase, Half Wave 60Hz Resistive or Inductive Loa 0 80 100 120 140 160 40 °C

Average Forward Rectified Current - Amperes versus Case Temperature -  $^{\circ}\text{C}$ 

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

Figure 3
Junction Capacitance



Junction Capacitance - pF *versus* Reverse Voltage - Volts

### S10AL thru S10ML



Figure 4
Typical Reverse Characteristics

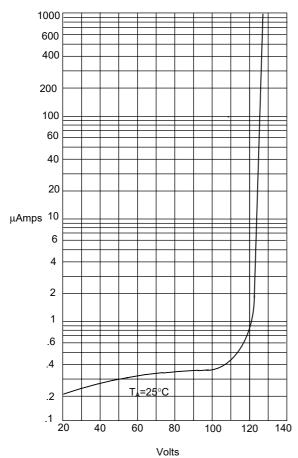


Figure 5 Peak Forward Surge Current 300 250 200 150 Amps 100 50 0 20 60 80 100 40 6 8 10 Cycles

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

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



#### Ordering Information:

Device	Packing
Part Number-TP	Tape&Reel: 3 Kpcs/Reel

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

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