



Micro Commercial Components

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S5AL THRU S5ML

5 Amp Silicon Rectifier 50 to 1000 Volts

Features

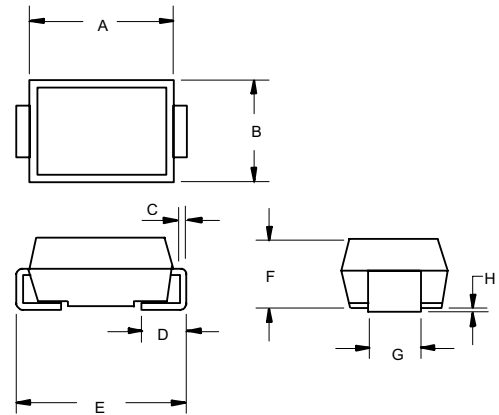
- For Surface Mount Applications
- Extremely Low Thermal Resistance
- High Current Capability
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
S5AL	S5A	50V	35V	50V
S5BL	S5B	100V	70V	100V
S5DL	S5D	200V	140V	200V
S5GL	S5G	400V	280V	400V
S5JL	S5J	600V	420V	600V
S5KL	S5K	800V	560V	800V
S5ML	S5M	1000V	700V	1000V

DO-214AB (SMCJ) (LEAD FRAME)



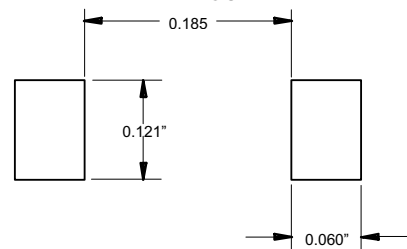
DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.260	.280	6.60	7.11	
B	.220	.245	5.59	6.22	
C	.006	.012	0.15	0.31	
D	.030	.060	0.76	1.52	
E	.305	.320	7.75	8.13	
F	.079	.103	2.00	2.62	
G	.108	.128	2.75	3.25	
H	.002	.008	0.050	0.203	

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	5.0A	$T_a = 75^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	100A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.20V	$I_{FM} = 5.0A$; $T_a = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	80µA 1mA	$T_a = 25^\circ\text{C}$ $T_a = 100^\circ\text{C}$
Typical Junction Capacitance	C_J	100pF	Measured at 1.0MHz, $V_R=4.0V$

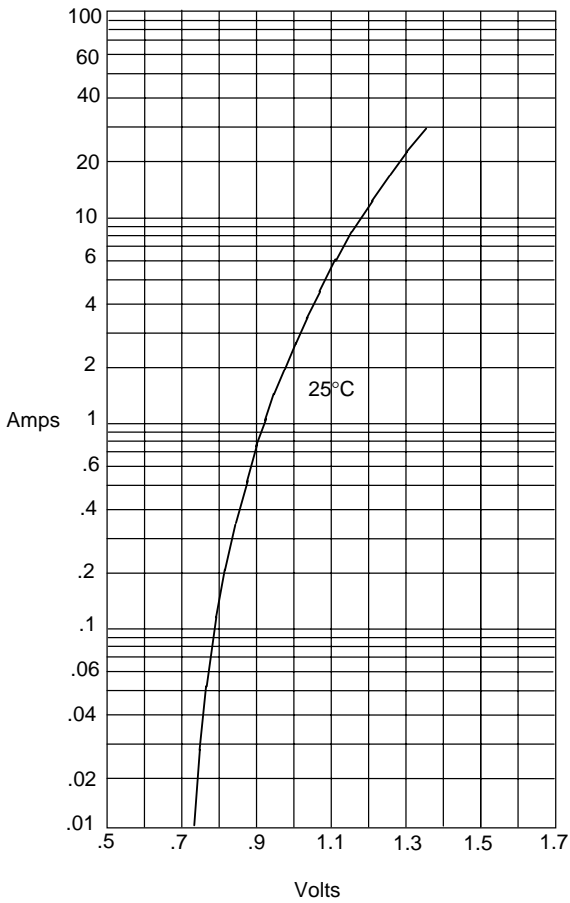
*Pulse test: Pulse width 200 µsec, Duty cycle 2%

SUGGESTED SOLDER PAD LAYOUT



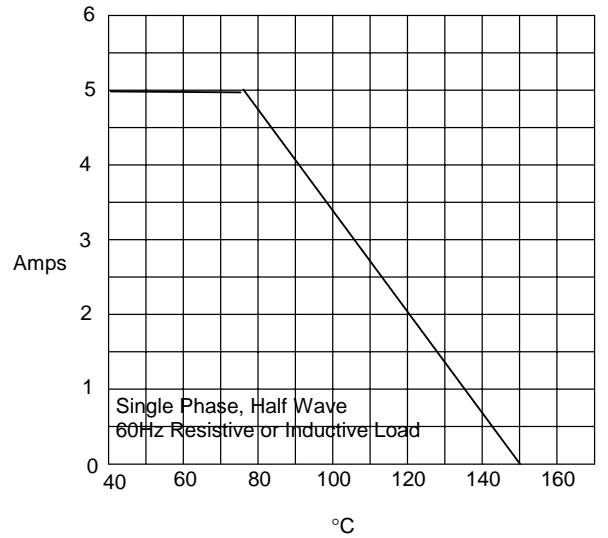
S5AL thru S5ML

Figure 1
Typical Forward Characteristics



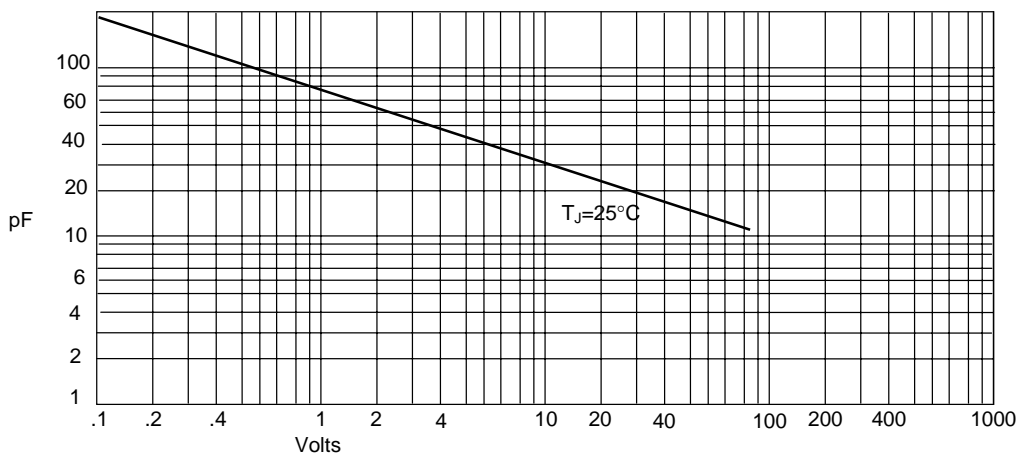
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Single Phase, Half Wave
60Hz Resistive or Inductive Load
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts



TM

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