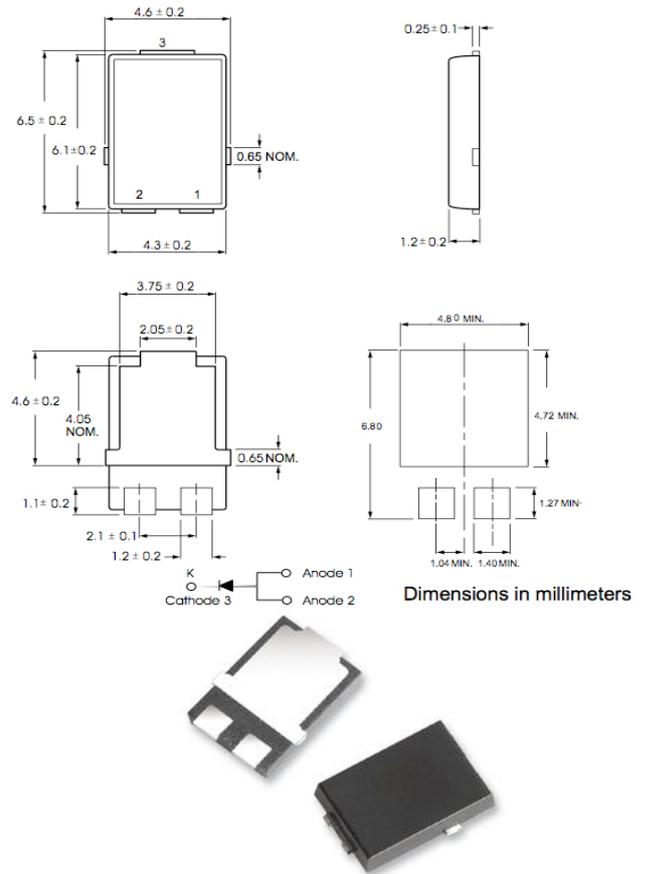


## High Current Density Surface Mount Schottky Rectifier SS15P50

### FEATURES

- Very low profile - typical height of 1.1 mm
- Ideal for automated placement
- Low forward voltage drop, low power losses
- High efficiency
- Low thermal resistance
- Meets MSL level 1, per J-STD-020
- Solder dip 260 °C max. 10 s, per JESD 22-A111
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



### MECHANICAL DATA

Case: Conform to JEDEC TO-277A

Molding compound meets UL 94 V-0 flammability

### Maximum Ratings (Tc=25°C unless otherwise noted)

Parameter	Symbol	SS15P50	Unit
Maximum repetitive peak reverse voltage	VRRM	50	V
Working peak reverse voltage	VRWM	35	V
Maximum DC blocking voltage	VDC	50	V
Maximum average forward rectified current Total device	IF(AV)	15	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	300	A
Non-repetitive avalanche energy at 25 °C IAS = 2 A per diode	EAS	20	m'J
Operating junction temperature range	TJ	-55 to +150	°C
Storage temperature range	TSTG	-55 to +150	°C

Note:

- (1) Mounted on 30 mm x 30 mm Al P.C.B. with 50 mm x 25 mm x 100 mm fin heat sink
- (2) Free air, mounted on recommended copper pad area

**Electrical characteristics** ( $T_c=25^\circ\text{C}$  unless otherwise noted)

Parameter	Symbol	Value		Unit
		Typical	Max	
Instantaneous forward voltage at $I_F=15\text{A}$ , $T_j=25^\circ\text{C}$ at $I_F=15\text{A}$ , $T_j=125^\circ\text{C}$	$V_F$	0.53 0.50	0.56	V
Maximum reverse current $T_j=25^\circ\text{C}$	$I_R$	300		$\mu\text{A}$
at working peak reverse voltage $T_j=125^\circ\text{C}$		50		$\text{m}'\text{A}$

**Thermal characteristics** ( $T_c=25^\circ\text{C}$  unless otherwise noted)

Parameter	Symbol	Value	Unit
Typical thermal resistance	$R_{\theta JA}$	60	$^\circ\text{C}/\text{W}$
	$R_{thjc}$	3	

**Notes:**

- (1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle
- (2) Pulse test: Pulse width  $\leq 40$  ms

## Characteristics Curve

Fig. 1 - Forward Current Derating Curve

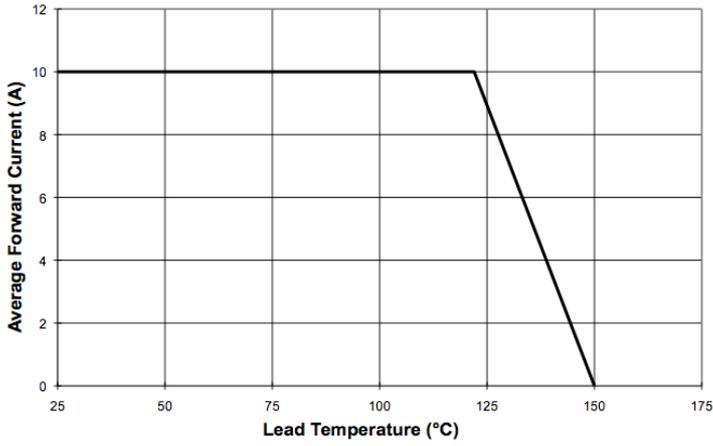


Fig. 2 - Max Non-Repetitive Peak Forward Surge Current

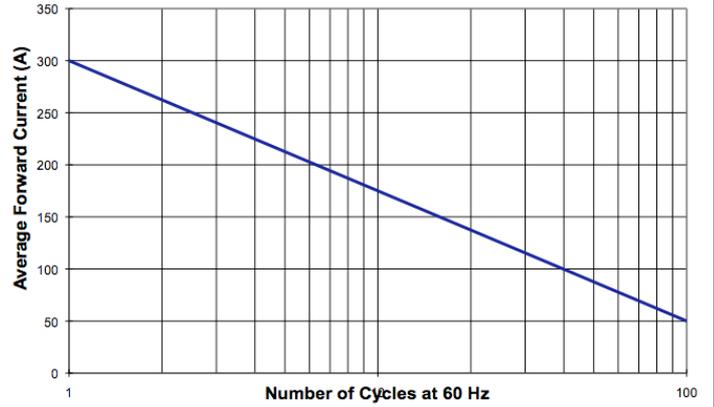


Fig. 3 - Typical Instantaneous Forward Characteristics

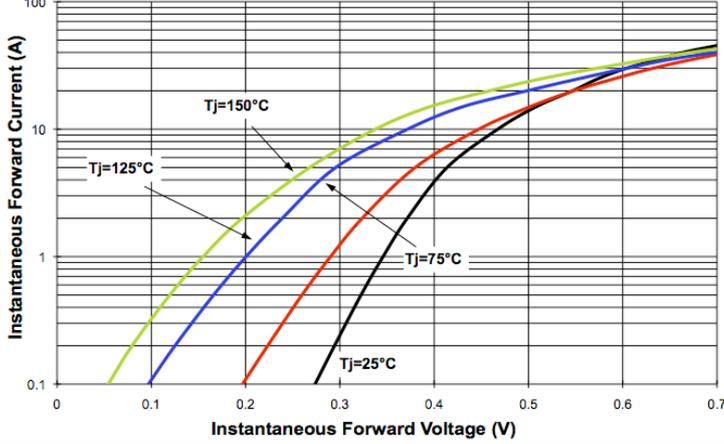


Fig. 4 - Typical Reverse Characteristics

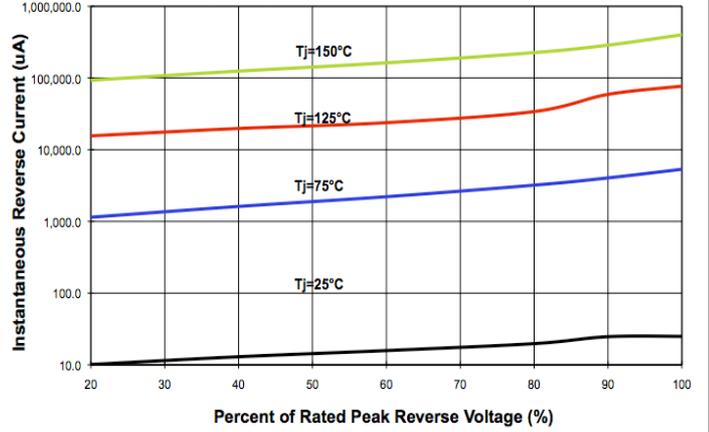


Fig. 5 - Typical Junction Capacitance

