

SS10PU200S

High Current Density Surface Mount Ultra Low VF Schottky Rectifier

Description

The SS10PU100S provides very low VF and excellent reverse leakage stability at high temperatures in TO-277A/B package. It is ideal for use as a rectifier, freewheel diode or blocking diode

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
- RoHS compliant package

Mechanical Data

- Case: Conform to JEDEC TO-277A; Suffix /A
Industry TO-277B; Suffix /B
- Molding compound meets UL 94 V-0 flammability

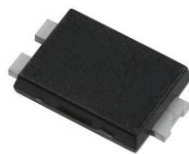
Packing & Order Information

3,000/Reel

TO-277A

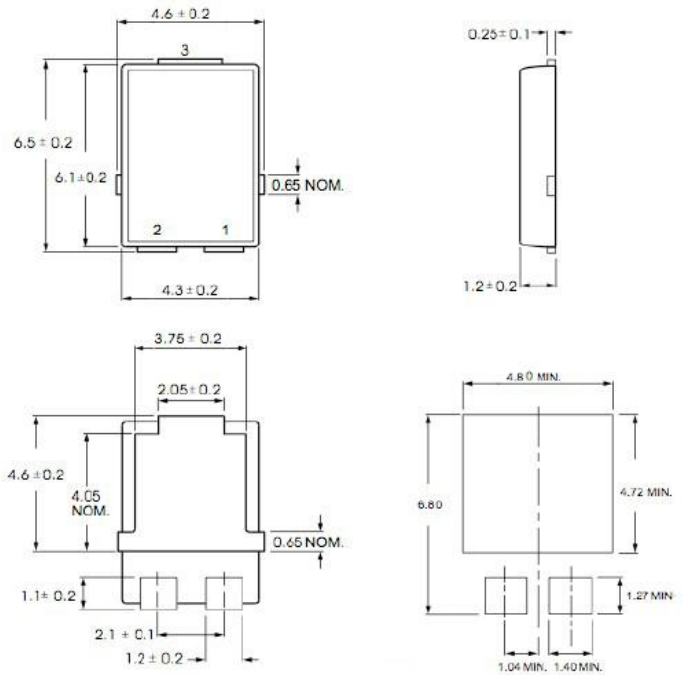


TO-277B

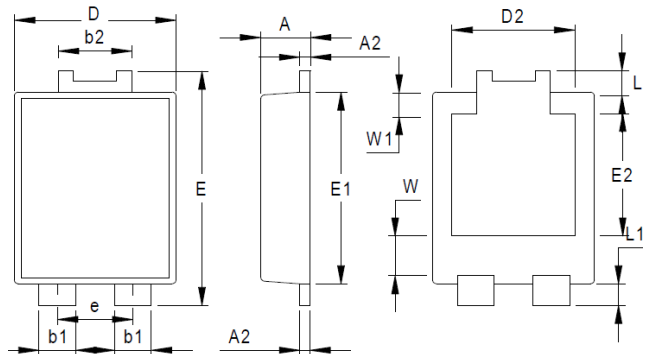


RoHS
COMPLIANT

TO-277A



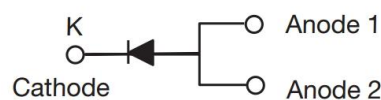
TO-277B



NO	Dimensions	NO	Dimensions
A	1.20±0.1	e	1.84Typ
A2	0.25±0.05	E1	5.3±0.1
b1	0.9±0.1	E2	3.3±0.2
b2	1.8±0.1	L	0.6±0.1
D	3.95±0.1	L1	0.6±0.1
D2	3.00Typ	W	1.3±0.2
E	6.5±0.1	W1	0.8±0.15

All Dimensions in mm

Graphic symbol



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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Parameter	Symbol	SS10PU200S	Unit
Maximum repetitive peak reverse voltage	VRRM	200	V
Working peak reverse voltage	VRWM	140	V
Maximum DC blocking voltage	VDC	200	V
Maximum average forward rectified current	IF(AV)	10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	160	A
Non-repetitive avalanche energy at 25 °C IAS = 2 A per diode	EAS	30	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 (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value		Unit
		Typical	Max	
Instantaneous forward voltage at IF=5A, Tj=25°C at IF=10A, Tj=25°C at IF=5A, Tj=125°C at IF=10A, Tj=125°C	VF	0.66	0.71	V
		0.72	0.77	
		0.62	0.67	
		0.71	0.78	
Maximum reverse current per leg at working peak reverse voltage	IR	10		u'A
Tj=25°C		2		m'A
Tj=125°C				

Thermal characteristics (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Typical thermal resistance	RθJA	60	°C/W
	Rthjc	3	

Notes:

- (1) Pulse test: 300 μs pulse width, 1 % duty cycle
- (2) Pulse test: Pulse width ≤ 40 ms

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■ Characteristics Curve

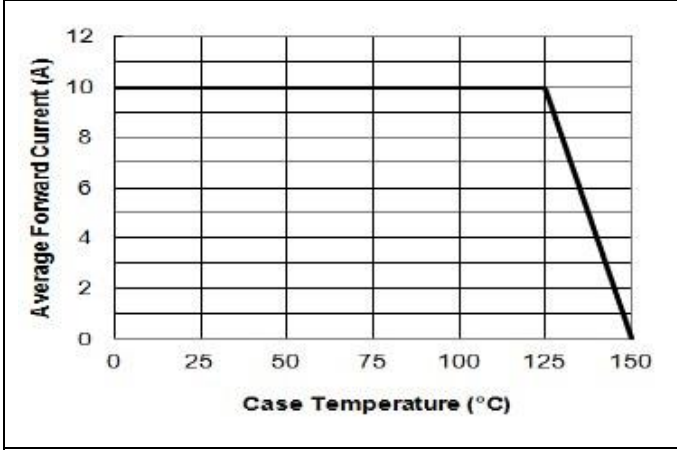


FIG.1-FORWARD CURRENT DERATING CURVE

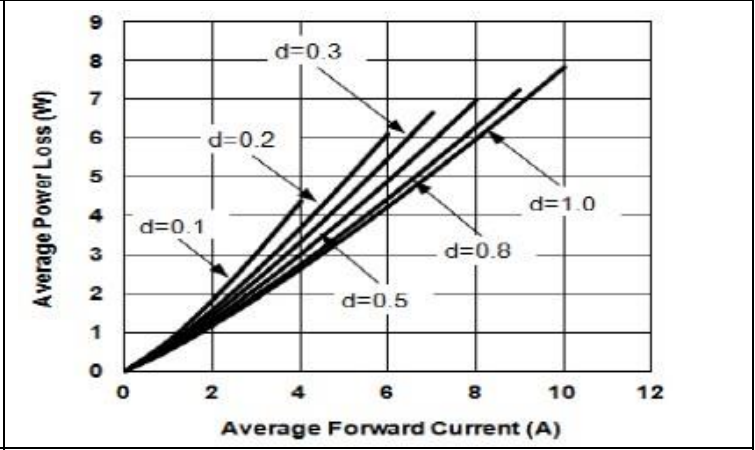


FIG.2-FORWARD POWER LOSS CHARACTERISTICS

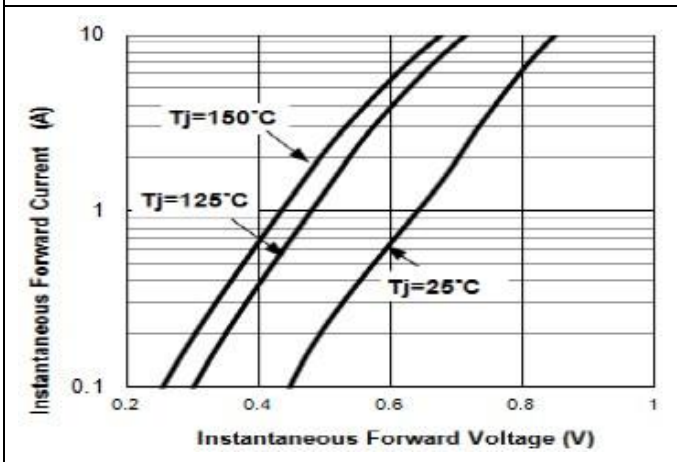


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

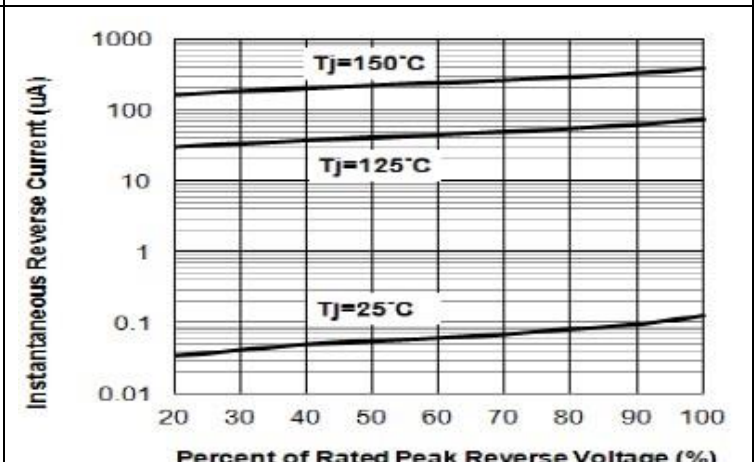


FIG.4-TYPICAL REVERSE CHARACTERISTICS

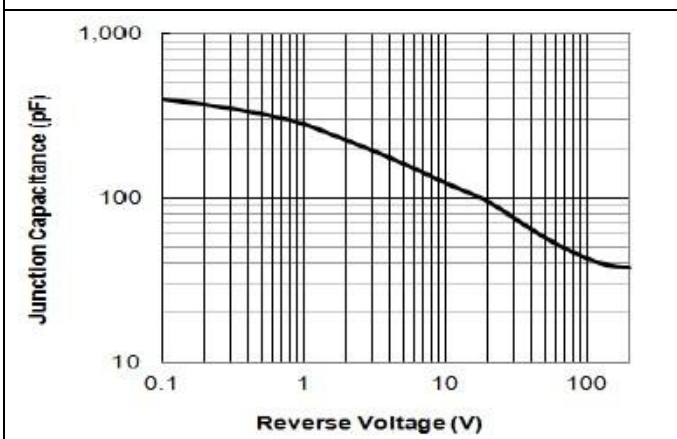


FIG.5-TYPICAL JUNCTION CAPACITANCE

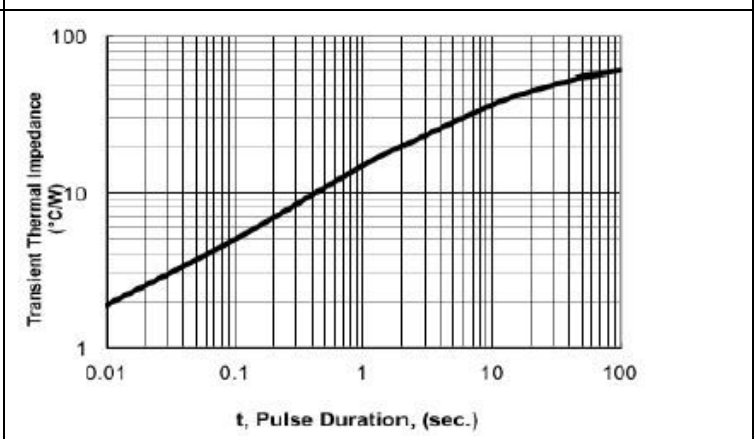


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

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