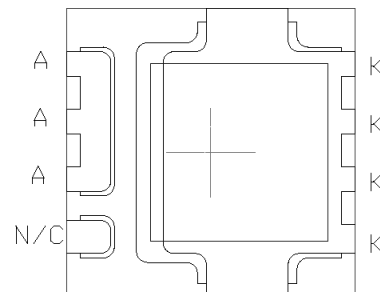


High Current Density Surface Mount Ultra Low VF Schottky Rectifier SD10PU100

DFN 3.3X3.3 X1.0mm

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: DFN 3.3X3.3

Molding compound meets UL 94 V-0 flammability

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Parameter	Symbol	SD10PU100	Unit
Maximum repetitive peak reverse voltage	VRRM	100	V
Working peak reverse voltage	VRWM	100	V
Maximum DC blocking voltage	VDC	100	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	150	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 (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value		Unit
		Typical	Max	
Instantaneous forward voltage at IF=10A, Tj=25°C at IF=10A, Tj=125°C	VF	0.68 0.60	0.73	V
Maximum reverse current per leg Tj=25°C	IR	20		u'A
at working peak reverse voltage Tj=125°C		5		m'A

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

Characteristics Curve

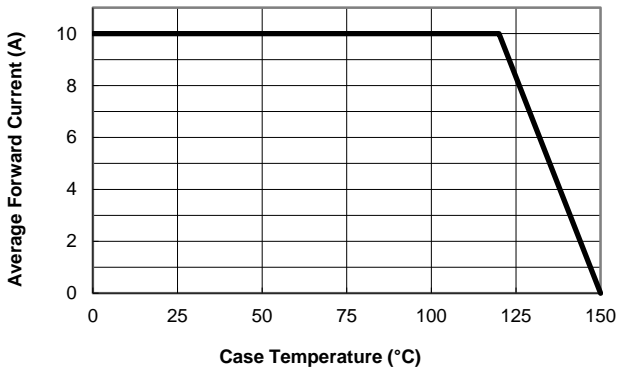


Figure 1. Forward Current Derating Curve

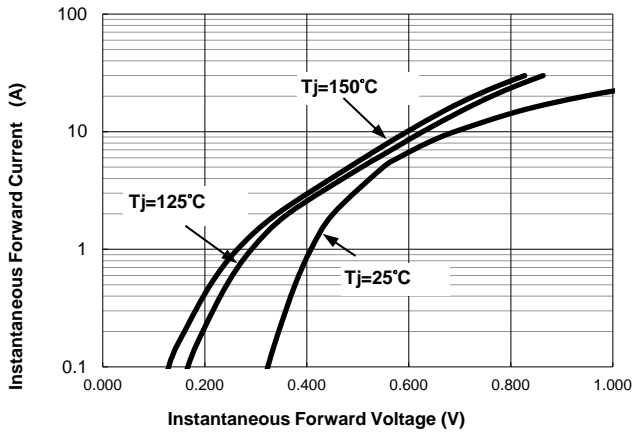
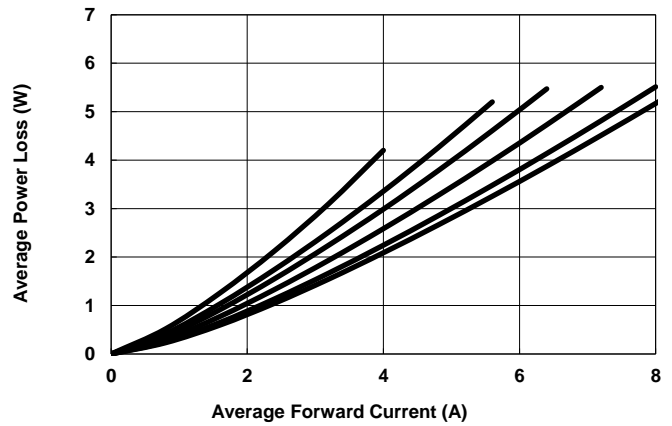


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

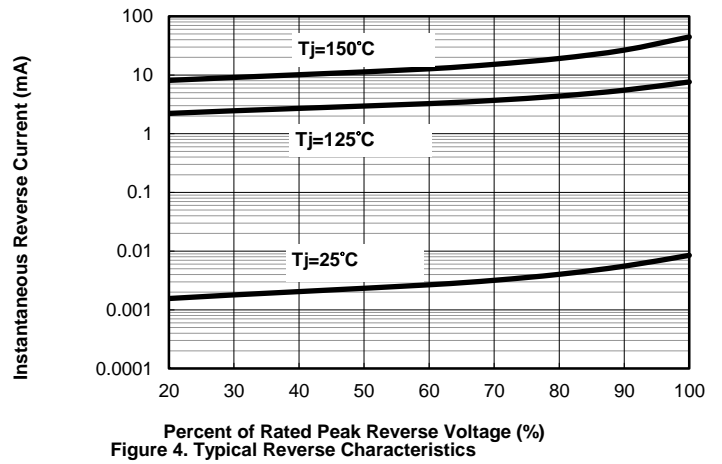


Figure 4. Typical Reverse Characteristics

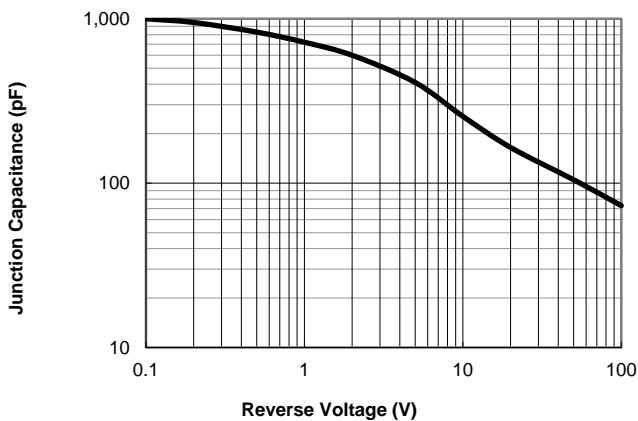


Figure 5. Typical Junction Capacitance

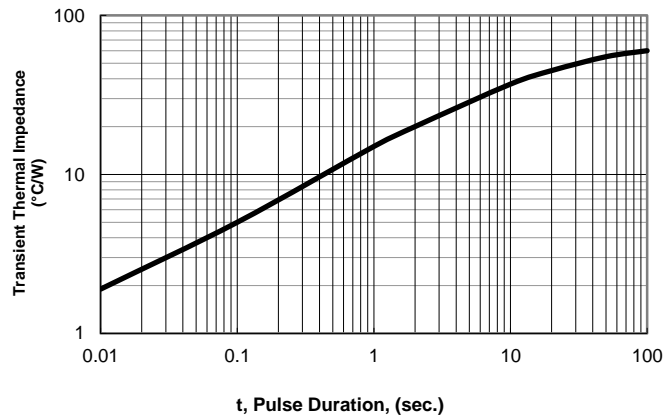


Figure 6. Typical Transient Thermal Impedance