SD10PU200

High Current Density Surface Mount Schottky Rectifier

Description

This Schottky rectifier is designed for switch mode power supply and high frequency DC to DC converters. Packaged in DFN 3.3mmx3.3mm, this device is intended for use in low voltage, high frequency, inverters, free-wheeling, by-pass diode and polarity protection applications. Its low profile was especially designed to be used in applications with space-saving constraints.

Features

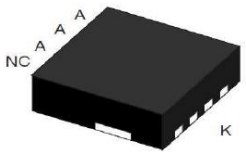
- Very low conduction losses
- Negligible switching losses
- Extremely fast switching
- Low thermal resistance
- Avalanche capacity specified
- High junction temperature
- RoHS compliant package

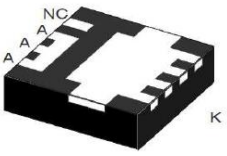
Mechanical Data

- Case:DFN 3.3*3.3
- Molding compound meets UL 94 V-0 flammability

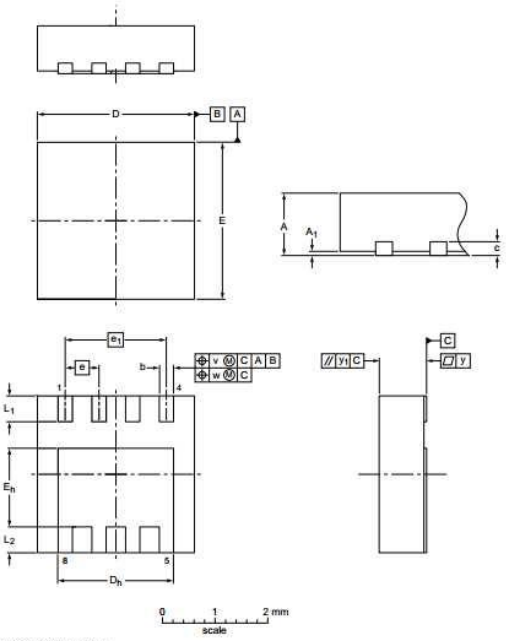
Packing & Order Information

3,000/Reel





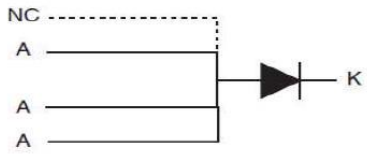
RoHS COMPLIANT



DIMENSIONS (mm are the original dimensions)

UNIT	A max.	A_1	b	c	D	D_h	E	E_h	e	e_1	L_1	L_2	v	w	y	y_1
mm	1	0.05 0.00	0.45 0.25	0.2	3.4 3.2	2.4 2.2	3.4 3.2	1.80 1.58	0.65	1.95	0.55 0.45	0.52 0.35	0.1	0.05	0.1	0.1

Graphic symbol



Device summary	
Symbol	Value
IF(AV)	10A
VRRM	200V
Tj(max)	150℃
VF(typ)	0.78

SD10PU200

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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings (Tc=25°C unless otherwise noted)			
Parameter	**Symbol**	**SD10PU200**	**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	VF	0.81	0.87	V
at IF=10A, Tj=25°C		0.90	1.05	
at IF=5A, Tj=125°C		0.67	0.72	
at IF=10A, Tj=125°C		0.78	0.88	
Maximum reverse current per leg Tj=25°C	IR	10		u'A
at working peak reverse voltage Tj=125°C		2		m'A

Thermal characteristics (Tc=25°C unless otherwise noted)			
Parameter	**Symbol**	**Value**	**Unit**
Typical thermal resistance	RθJA	90	°C/W
	RθJM	4	

Notes:

(1) Mounted on 30 mm x 30 mm Al P.C.B.; thermal resistance RθJM - junction to mount

(2) Free air, mounted on recommended copper pad area

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■Characteristics Curve

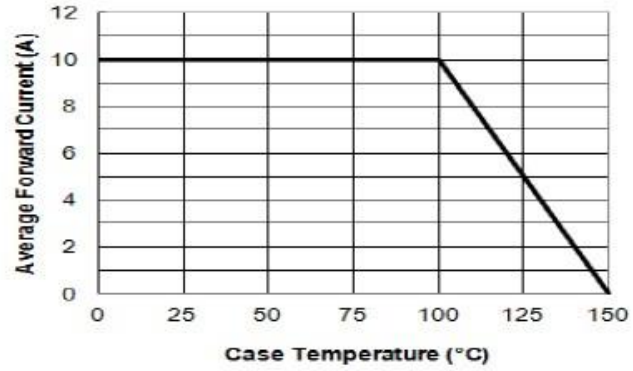

FIG.1-FORWARD CURRENT DERATING CURVE

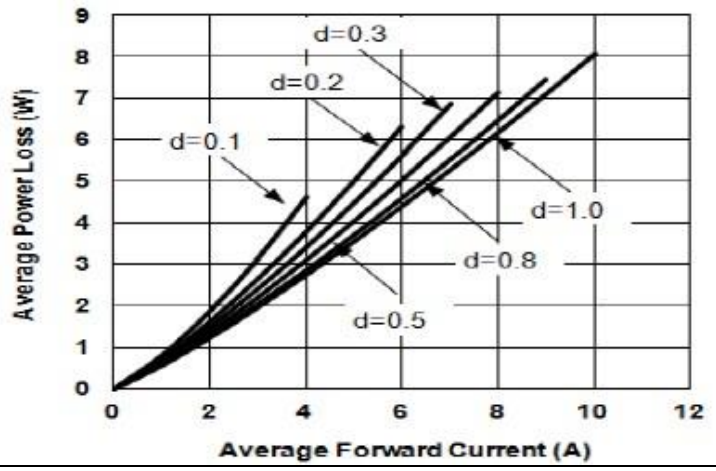

FIG.2-FORWARD POWER LOSS CHARACTERISTICS

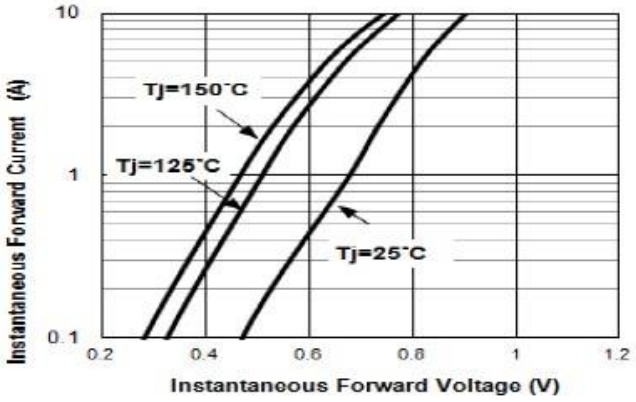

FIG.3-TYPICAL INSTARTANECLS FORWARD CHARACTERISTICS PER LEG

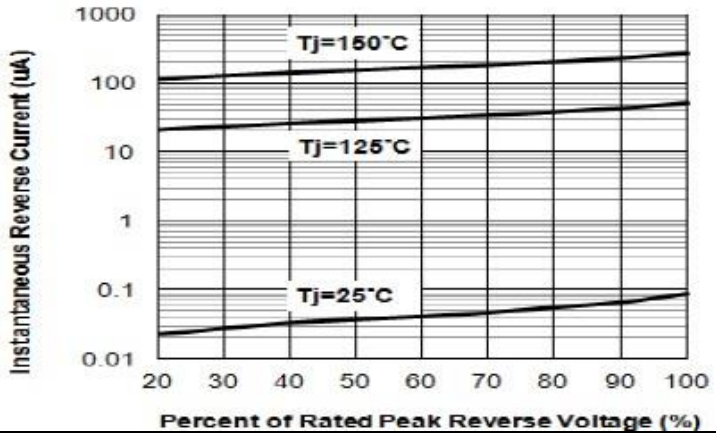

FIG.4-TYPICAL REVERSE CHARACTERISTICS

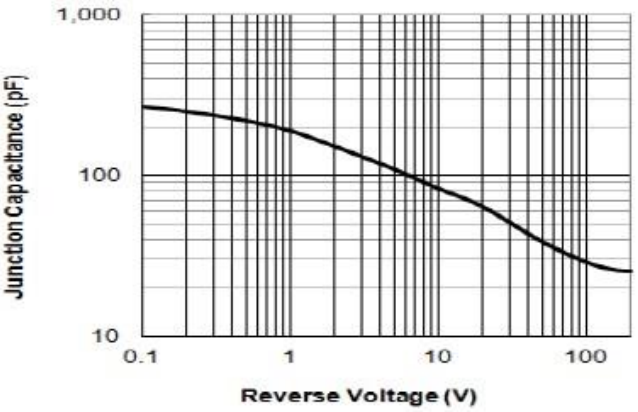

FIG.5-TYPICAL JUNCTION CAPACITANCE

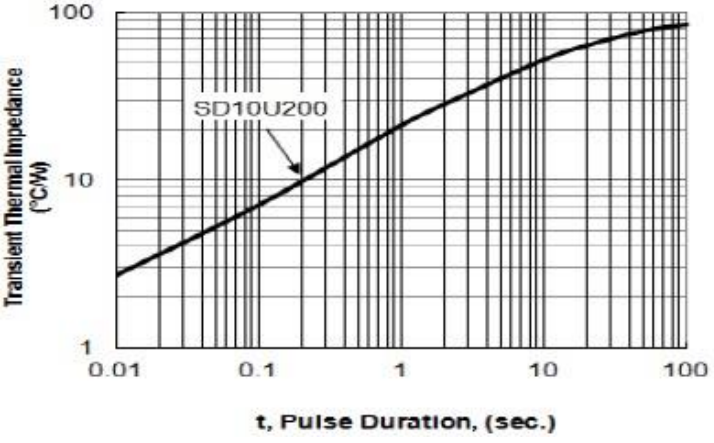

FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

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