

5A 100V Schottky Rectifier

Major ratings and characteristics

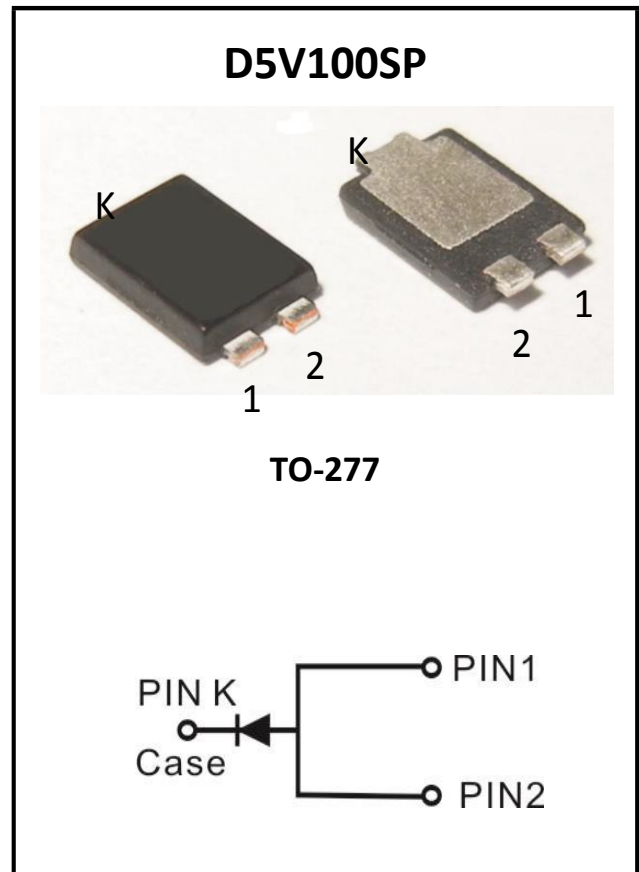
Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	5	A
V_{RRM}	100	V
$V_F@ 5A, T_j=125^\circ C$	0.55	V, typ.
T_j Operating Junction Temperature	-40 to +150	$^\circ C$

Features

- Super Low Forward Voltage (SLVF®) Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- 150 $^\circ C$ Operating Junction Temperature
- Lead Free Finish, RoHS Compliant
- Green Molding Compound (No Br, Sb)

Typical Applications

Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications



1. Characteristics

Maximum Ratings Characteristics (T_A = 25 °C unless otherwise specified)

Parameter	Symbol	Values	Units
DC Blocking Voltage	V _{RM}	100	Volts
Working Peak Reverse Voltage	V _{RWM}		
Peak Repetitive Reverse Voltage	V _{RRM}		
Average Rectified Forward Current Per device	I _o	5	Amps
Peak Forward Surge Current - 1/2 60hz	I _{FSM}	100	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	1	Amps
Typical Thermal Resistance			
Thermal Resistance junction to Ambient Note (1)	R _{θJA}	72	°C / W
Thermal Resistance junction to Ambient Note (2)	R _{θJA}	30	
Maximum Rate of Voltage Change (at Rated VR)	dv/dt	10000	V/uS
Operating Junction Temperature	T _J	- 40 to +150	°C
Storage Junction Temperature	T _{STG}	- 40 to +150	

Electrical Characteristics - (per leg) (T_A = 25 °C unless otherwise specified)

Parameter	Test Conditions		Symbol	Typ.	Max.	Units
Instantaneous Forward Voltage	IF = 3 A	T _J = 25 °C	VF*	0.51	-----	Volts
	IF = 5 A			0.59	0.63	
	IF = 3 A	T _J = 125 °C		0.46	-----	
	IF = 5 A			0.55	0.59	
Instantaneous Reverse Current	VRM=70V	T _J = 25 °C	IR*	2	-----	uA
	VRM=100V			-----	200	uA
	VRM=70V	T _J = 125 °C		4	-----	mA
	VRM=100V			-----	30	mA

* Pulse width < 300 uS, Duty cycle < 2%

Note 1. FR-4 PCB, 2 oz Copper. Minimum recommended pad layout

Note 2. Polyimide PCB, 2 oz Copper. Cathode pad dimensions 18.8x14.4mm , Anode pad dimensions- (5.6x14.4mm)

2. Characteristics Curves

Ratings and Characteristics Curves

(TA = 25°C unless otherwise specified)

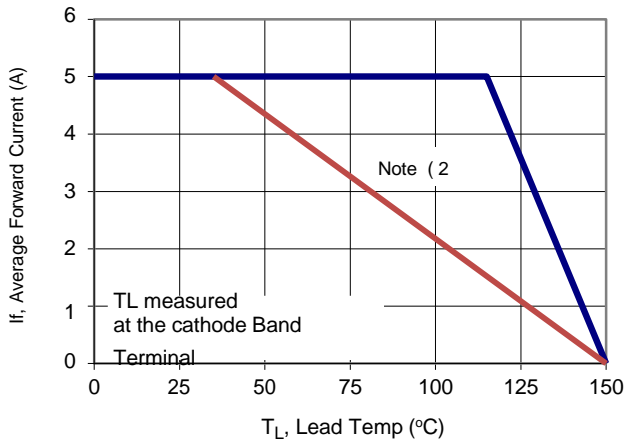


Figure 1: Current Derating, Case

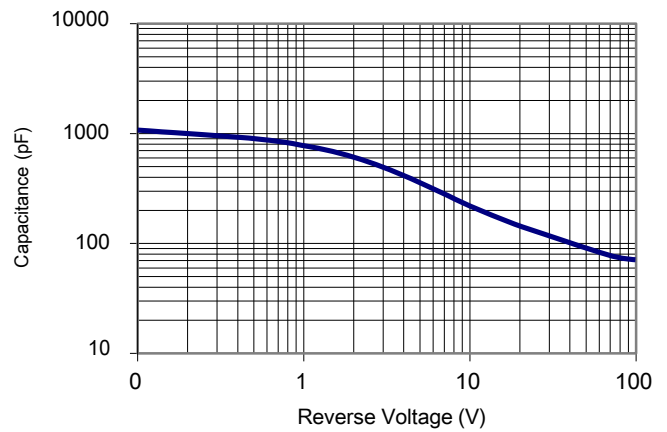


Figure 2: Typical Junction Capacitance

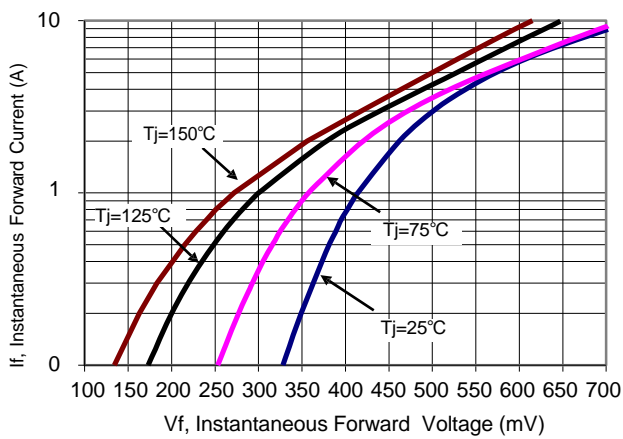


Figure 3: Typical Forward Voltage

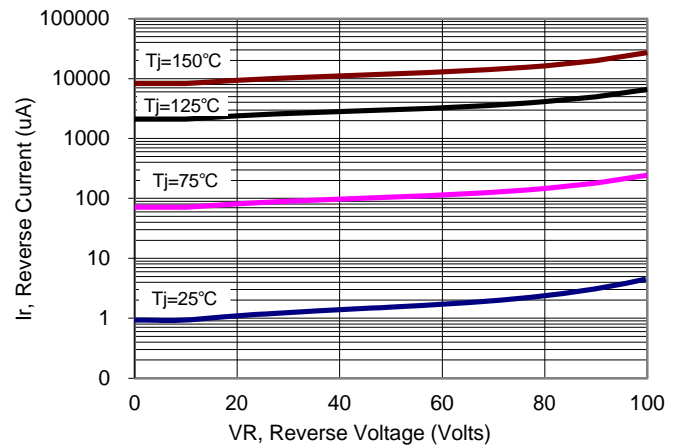
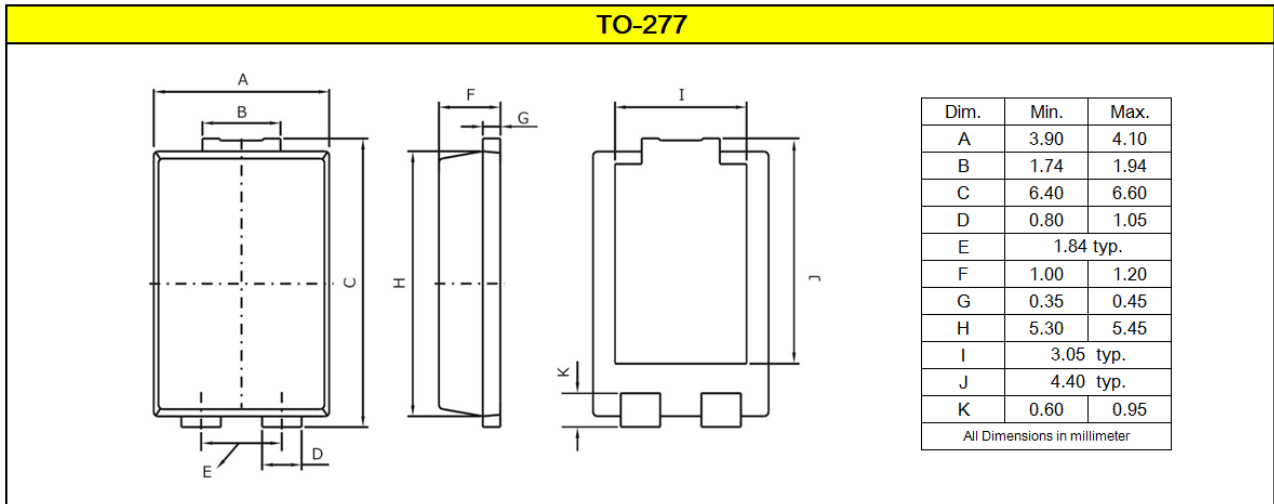


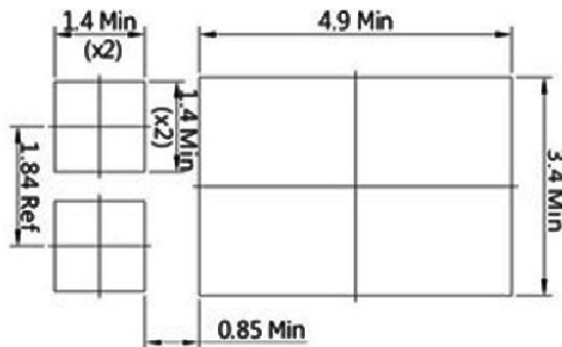
Figure 4: Typical Reverse Current

3. Package information

Suggested Package Outline Dimensions millimeters

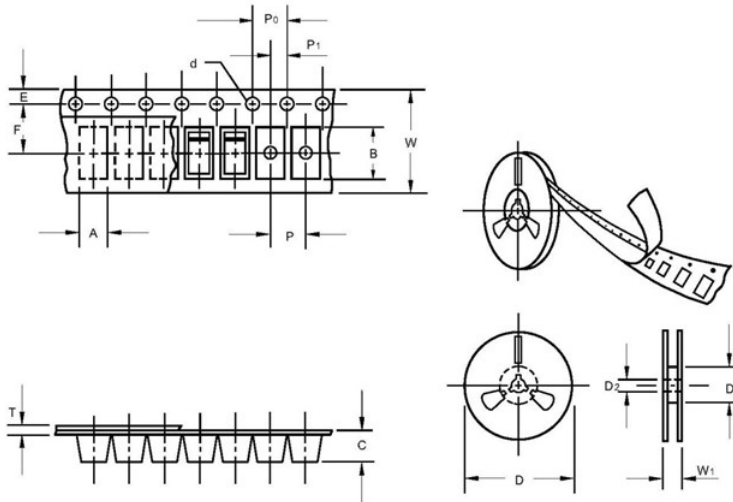


Mounting pad Outline Dimensions millimeters



4. Packing and Ordering information

Packing information millimeters



Item	Symbol	Dimension
Carrier width	A	4.4±0.10
Carrier length	B	7.0±0.10
Carrier depth	C	1.4±0.10
Sprocket hole	d	1.5±0.10
Reel outside diameter	D	330.0±1.0
Reel inner diameter	D1	75±1.0
Feed hole diameter	D2	13.5±1.0
Stocket hole position	E	1.75±0.10
Punch hole position	F	7.5±0.10
Punch hole pitch	P	8.0±0.10
Sprocket hole pitch	P0	4.0±0.10
Embossment center	P1	2.0±0.10
Total tape thickness	T	0.3±0.10
Tape width	W	16.0±0.20
Reel width	W1	22.7±1.5

Ordering information

Part Number	Marking Number	Package	Base Quantity	Delivery mode
D5V100SP	T5V100	TO-277	5000	13" tape and reel

Mechanical

- Molder Plastic: UL Flammability Classification Rating 94V-0
- Device Weight : 0.003 ounces (0.093grams) - TO-277