

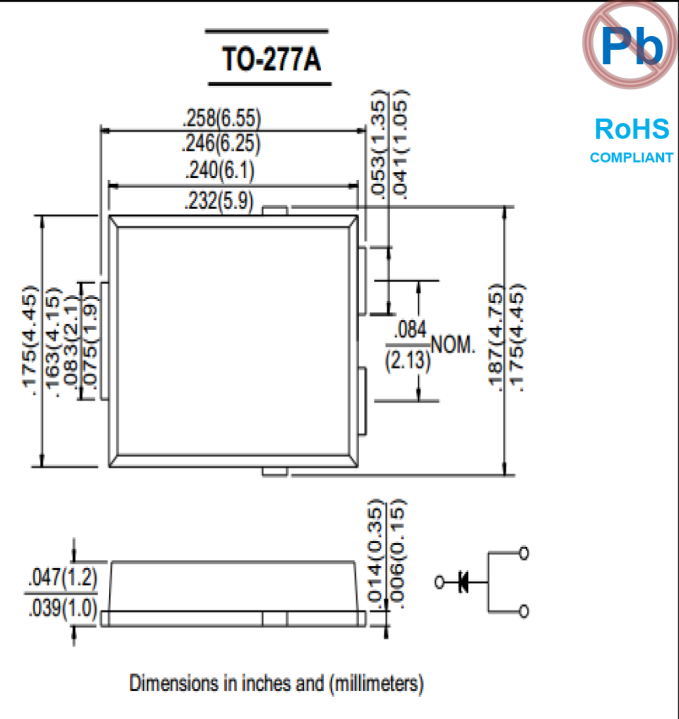
SCHOTTKY BARRIER RECTIFIERS	REVERSE VOLTAGE	100	Volts
	FORWARD CURRENT	5	Amperes

FEATURES

- Very low profile - typical height of 1.1mm
- Ideal for automated placement
- Trench Schottky Technology
- High current capability, low VF
- High efficiency operation
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C
- Compliant to RoHS Directive 2002/95/EC and accordance to WEEE 2002/96/EC
- For use in low voltage, high frequency inverters, free wheeling, switching power supplies, DC-DC converter, and polarity protection applications

MECHANICAL DATA

- Case: TO-277A (SMP)
- Molding compound meets UL 94 V-0 flammability rating
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.
 Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%

MAXIMUM RATINGS (T_A = 25 °C unless otherwise noted)

CHARACTERISTICS	SYMBOL	SHTS5U100	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	100	V
Maximum RMS Voltage	V _{RMS}	70	V
Maximum DC Blocking Voltage	V _{DC}	100	V
Maximum Average Forward Rectified Current (See Fig.1)	I <sub(av)< sub=""></sub(av)<>	5	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load	I _{FSM}	50	A
Peak repetitive reverse current at tp = 2 μs, 1 kHz	I _{RRM}	1	A
Operating Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +175	°C

ELECTRICAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)

PARAMETER / CONDITIONS	SYMBOL	Typ	Max	UNIT	
Breakdown voltage per diode	V _{BR}	110 (minimum)	-	V	
Forward Voltage (Note1)	V _F	IF=2.5A @TJ=25°C	0.51	0.55	V
		IF=2.5A @TJ=125°C	0.45	0.48	
		IF=5A @TJ=25°C	0.61	0.69	
		IF=5A @TJ=125°C	0.57	0.61	
Maximum DC Reverse Current @T _J =25°C	I _R		112	μA	
at Rated DC Bolcking Voltage @T _J =125°C			24	mA	
Typical Junction Capacitance (Note2)	C _J	322		pF	

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	Typ	UNIT
		SHTS5U100	
Thermal Resistance Per Diode (Note3)	R _{θJL}	4.0	°C/W

NOTES: 1. 300us pulse width, 2% duty cycle.
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
 3. Thermal resistance junction to case.

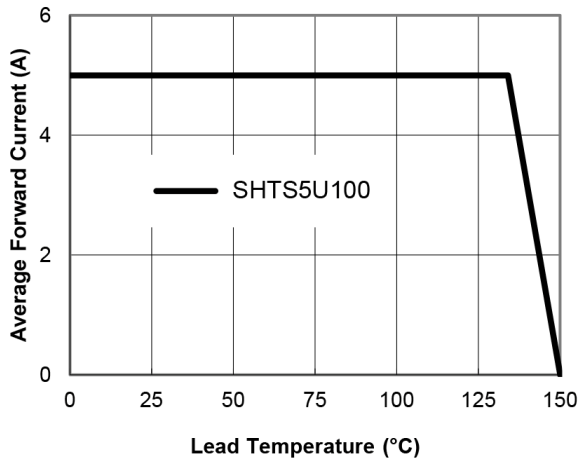


Figure 1. Forward Current Derating Curve

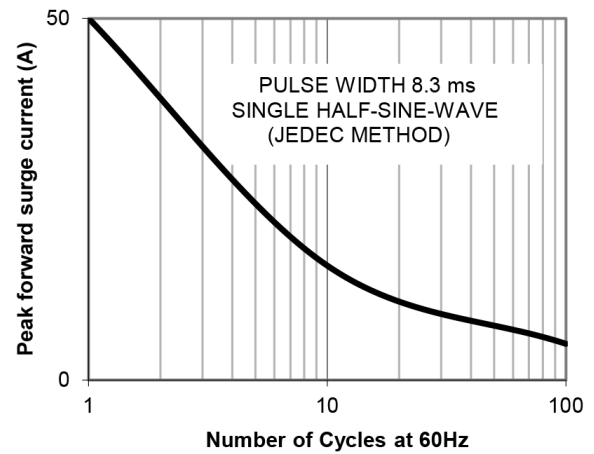


Figure 2. Maximum NON-Repetitive Surge

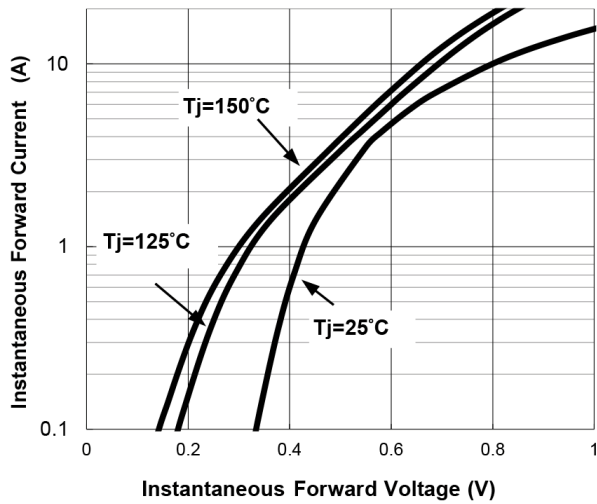


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

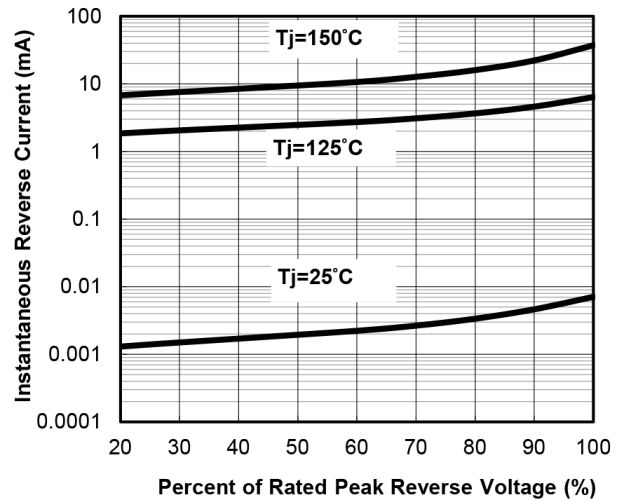


Figure 4. Typical Reverse Characteristics

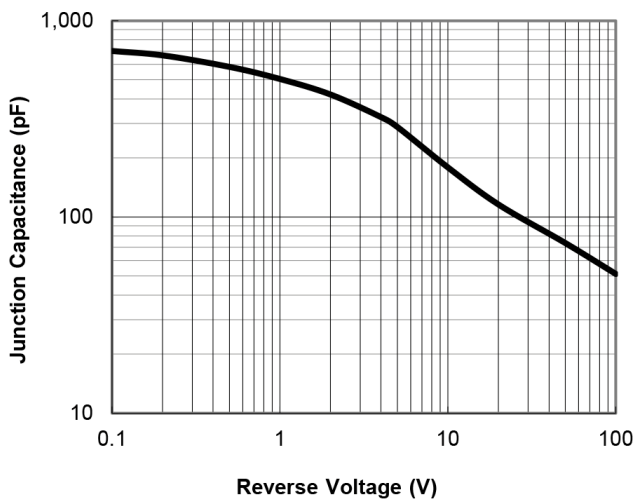


Figure 5. Typical Junction Capacitance

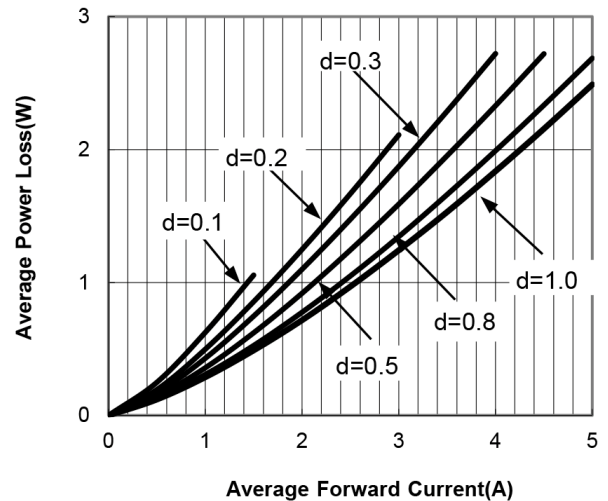


Figure 6. Forward Power Loss Characteristics