



# SM20150T



## Schottky Barrier Rectifiers



**TO-277**

### Primary Characteristics

$I_F$	20	A
$V_{RRM}$	150	V
$I_{FSM}$	250	A
$V_F$	0.93	V
$T_J \text{ max}$	150	°C

### Features

- Schottky Barrier Chip
- High Thermal Reliability
- Patented Super Barrier Rectifier Technology
- High Forward Surge Capability
- Ultra Low Power Loss, High Efficiency
- Excellent High Temperature Stability

### Mechanical Data

- Case : TO-277
- Case Material : Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals : Lead Free Plating (Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity : Cathode Band

### Ordering Information

Part No.	Remark	Package	Packing
SM20150T	RoHS Compliant	TO-277	5000 / Tape & Reel
SM20150T-H	Halogen Free		

### Maximum Ratings (TA=25°C unless otherwise noted)

Parameter	Symbol	SM20150T	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	150	V
Maximum RMS Voltage	$V_{RMS}$	105	V
Maximum DC Blocking Voltage	$V_{DC}$	150	V
Maximum Average Forward Rectified Current	$I_F$	20	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	250	A
Maximum Instantaneous Forward Voltage IF=1A @ 25°C IF=10A @ 25°C IF=20A @ 25°C	$V_F$	0.48 Typ. 0.75 Typ. 0.93 Max.	V
Maximum DC Reverse Current @ TA=25°C at Rated DC Blocking Voltage @ TA=100°C	$I_R$	0.3 15	mA
Typical Thermal Resistance	$R_{\theta JC}$	20	°C/W
Operating Temperature Range	$T_J$	-55 to +150	°C
Storage Temperature Range	$T_{STG}$	-55 to +150	°C
Marking Code		SM20150T	



Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

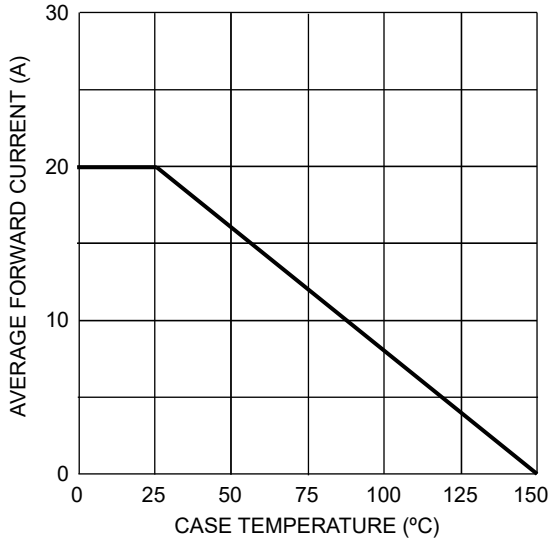


FIG. 2-Typical Forward Characteristics

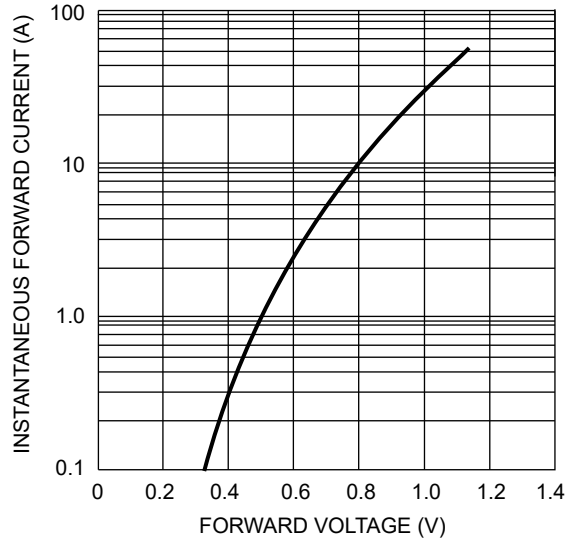


FIG. 3-Maximum Non-Repetitive Forward Surge Current

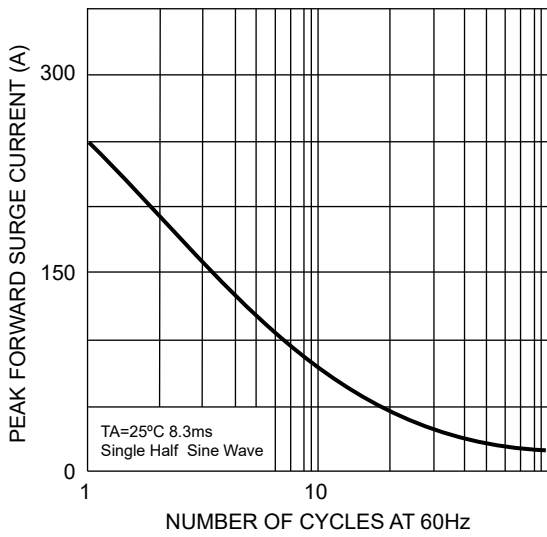
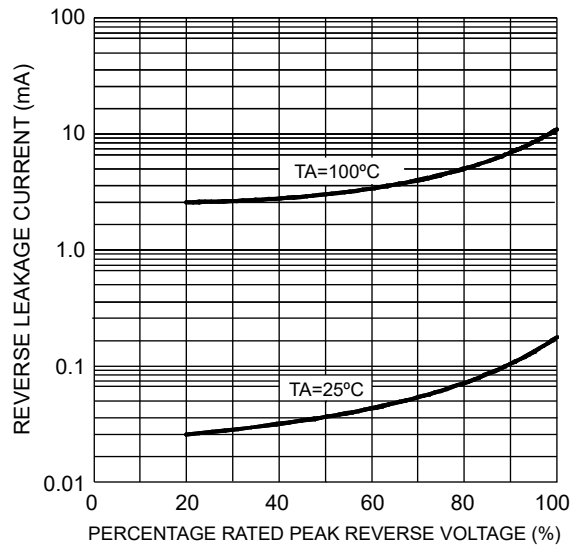


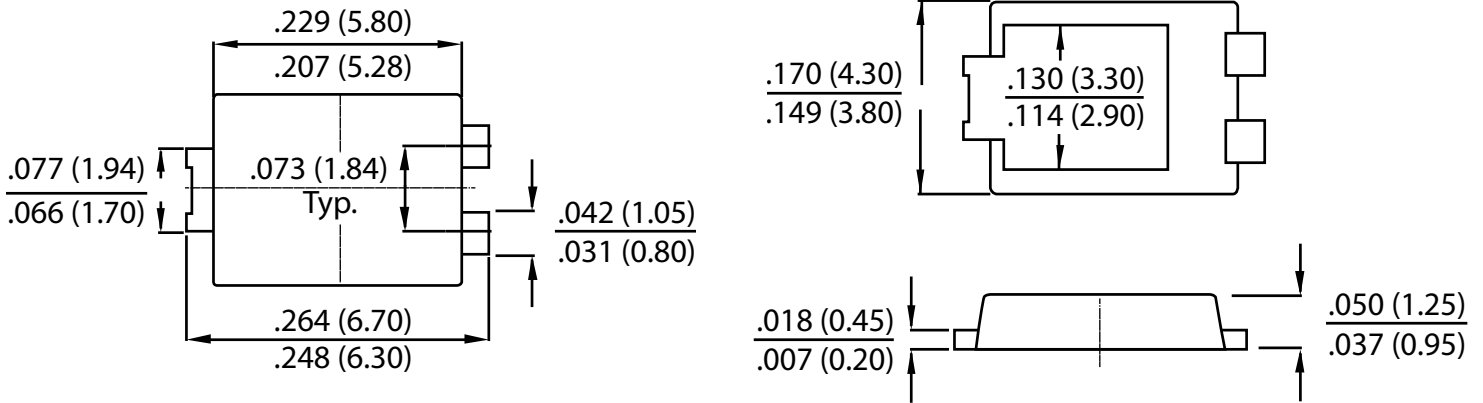
FIG. 4-Typical Reverse Characteristics





Schottky Barrier Rectifiers

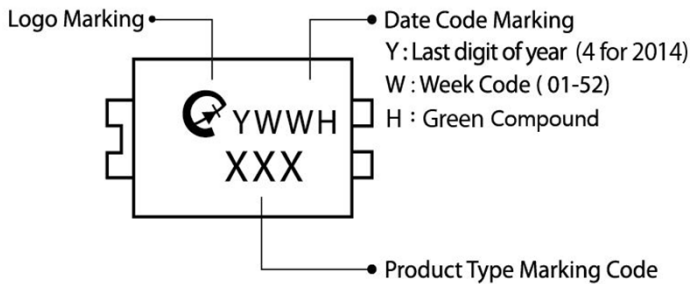
Package Outline Dimensions



TO-277

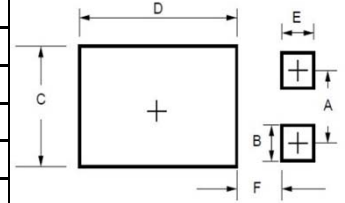
Dimensions in inches and (millimeters)

Marking Information



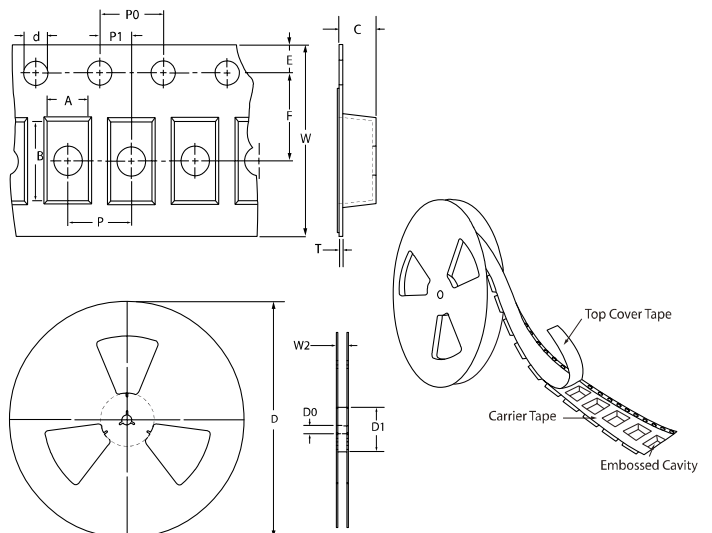
Suggested Pad Layout

Outline Dimension	TO-277
A	1.94
B	1.40
C	3.40
D	4.90
E	1.40
F	1.40



Tape & Reel Specification

Item	Symbol	TO-277 (mm)
Carrier width	A	4.5 (max)
Carrier length	B	7.1 (max)
Carrier depth	C	1.4 ± 0.1
Sprocket hole	d	1.50 ± 0.1
Reel outside diameter	D	330 ± 2.0
Feed hole diameter	D0	13.5 ± 1.0
Reel inner diameter	D1	50 (min)
Sprocket hole position	E	1.75 ± 0.1
Punch hole position	F	6.5 ± 1.1
Sprocket hole pitch	P	8.0 ± 0.1
Sprocket hole pitch	P0	4.0 ± 0.1
Embossment center	P1	2.0 ± 0.1
Overall tape thickness	T	0.6 (max)
Tape width	W	14 ± 2.2
Reel width	W2	24.5 (max)





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