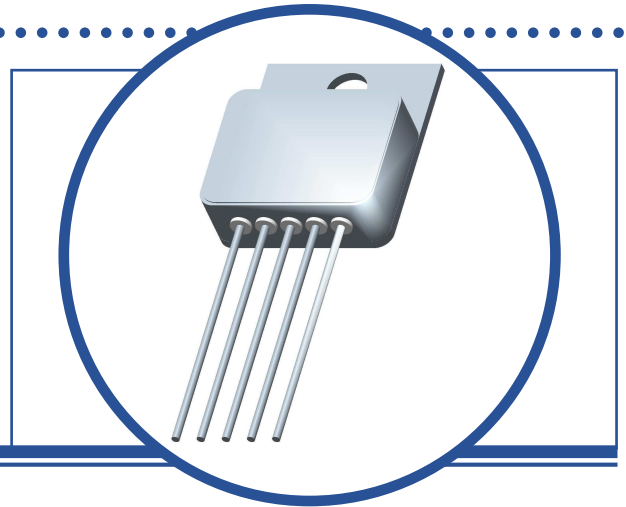


# ULTRAFAST RECOVERY POWER RECTIFIER DIODE

## SML1200HIC-FB

- 1200V, 8A Full Bridge Rectifier Configuration
- Fast Reverse Recovery ( $t_{rr} = 40\text{ns}$ )
- High Speed Low Loss Switching
- Hermetic TO258D Isolated Package with Ceramic Seals
- Switch Mode Power Supply applications
- High-Reliability Screening Options Available



### ABSOLUTE MAXIMUM RATINGS (Per Die, $T_A = 25^\circ\text{C}$ unless otherwise stated)

$V_{RRM}$	Repetitive Peak Reverse Breakdown Voltage	1200V
$V_{RSM}$	Surge Peak Reverse Voltage	1200V
$V_{DC}$	DC Blocking Voltage	1200V
$I_F(\text{AVG})$	Average Forward Current	8A
$I_{FSM}$	Surge Current, $t_p = 8.3\text{ms}$	56A
$T_J$	Junction Temperature Range	-65 to +175°C
$T_{stg}$	Storage Temperature Range	-65 to +175°C

### THERMAL PROPERTIES (Per Die)

Symbols	Parameters	Max.	Units
$R_{\theta JC}$	Thermal Resistance, Junction To Case	2.4	°C/W

### ELECTRICAL CHARACTERISTICS (Per Die, $T_A = 25^\circ\text{C}$ unless otherwise stated)

Symbols	Parameters	Test Conditions	Min.	Typ.	Max.	Units
$V_F^{(1)}$	Forward Voltage	$I_F = 8.0\text{A}$ $T_A = 150^\circ\text{C}$			2.75	V
					1.79	
$I_R$	Reverse Current	$V_R = V_{RRM}$ $T_A = 150^\circ\text{C}$			100	$\mu\text{A}$
					500	

### DYNAMIC CHARACTERISTICS

$t_{rr}$	Reverse Recovery Time	$I_F = 1.0\text{A}$ $V_R = 30\text{V}$ $di/dt = 100\text{A}/\mu\text{s}$ (min)		40		ns
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#### Notes

(1) Pulse Width  $\leq 300\mu\text{s}$ ,  $\delta \leq 2\%$

Semelab Limited reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

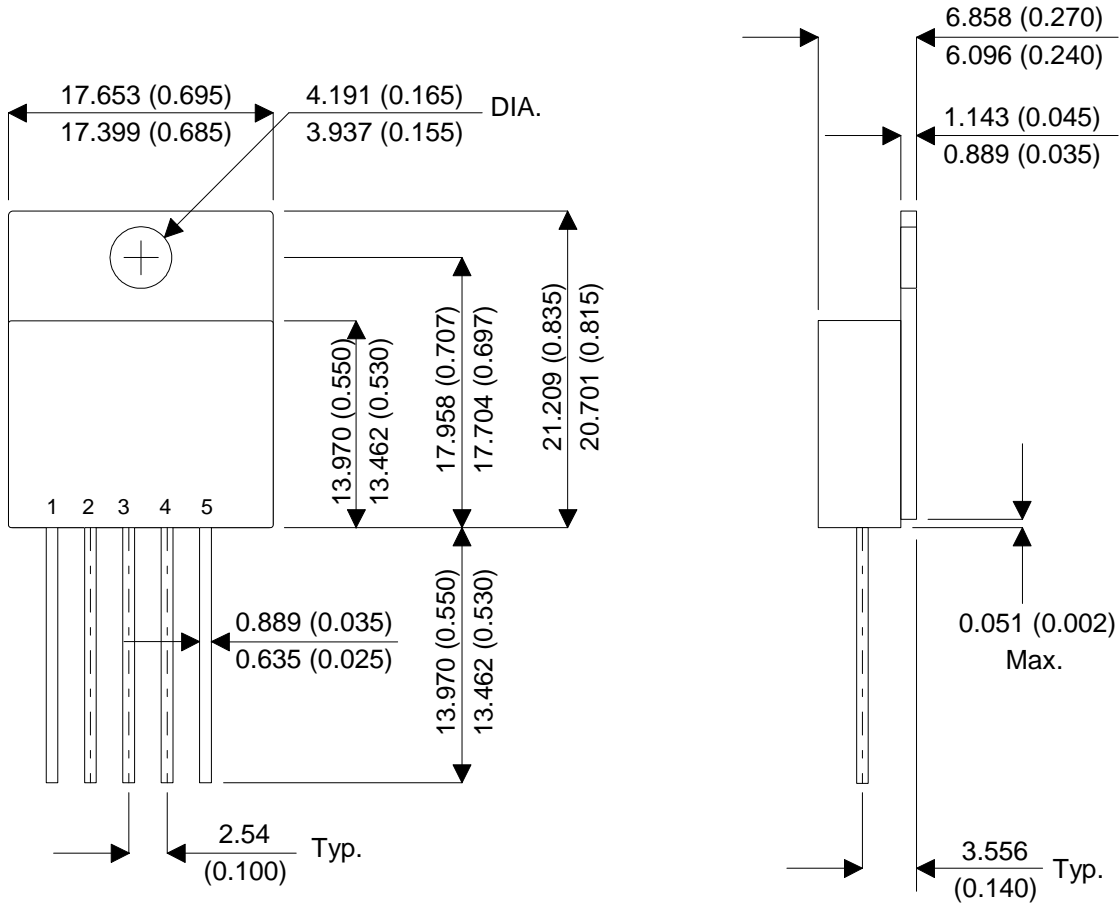


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## MECHANICAL DATA

Dimensions in mm (Inches)



## TO258D (MO-078AA)

PIN 1	+ Rectified DC
PIN 2	+ AC
PIN 3	N/C
PIN 4	- AC
PIN 5	- Rectified DC

