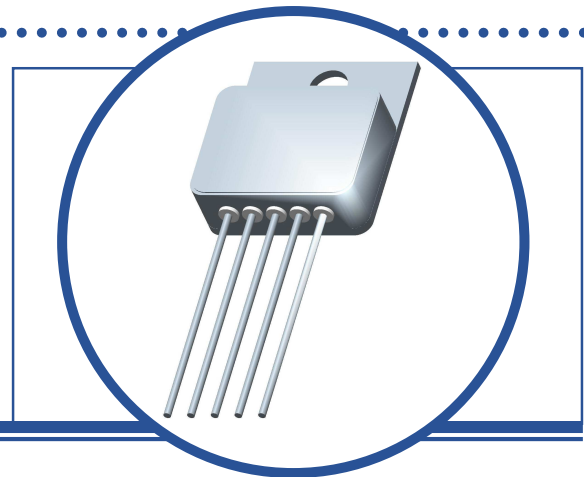


# SILICON CARBIDE POWER SCHOTTKY RECTIFIER DIODE BRIDGE

## SML010FBDH06

- 600V, 10A Full Bridge Rectifier Configuration
- High Temperature Operation  $T_j = 200^\circ\text{C}$
- Effective Zero Reverse and Forward Recovery
- High Speed Low Loss Switching
- High Frequency Operation
- High-Reliability Screening Options Available



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

$V_{RRM}$	Repetitive Peak Reverse Breakdown Voltage	600V
$V_{RSM}$	Surge Peak Reverse Voltage	600V
$V_{DC}$	DC Blocking Voltage	600V
$I_F(\text{AVG})$	Average Forward Current	10A
$I_{FSM}$	Non Repetitive Peak Forward Surge Current, $t_p = 10\mu\text{s}$	45A
$T_j$	Junction Temperature Range	-55 to $+200^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55 to $+225^\circ\text{C}$

### THERMAL PROPERTIES (Per Die)

Symbols	Parameters	Max.	Units
$R_{\theta JC}$	Thermal Resistance, Junction To Case	2.0	$^\circ\text{C/W}$

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

Symbols	Parameters	Test Conditions	Min.	Typ.	Max.	Units
$V_F^{(1)}$	Forward Voltage	$I_F = 10\text{A}$ $T_c = 175^\circ\text{C}$		1.8	2.2	V
				2.0	2.7	
$I_R$	Reverse Current	$V_R = V_{RRM}$ $T_c = 175^\circ\text{C}$		10	100	$\mu\text{A}$
					1000	

### DYNAMIC CHARACTERISTICS

$Q_C$	Total Capacitive Charge	$I_F = 10\text{A}$ $di/dt = 500\text{A}/\mu\text{s}$	$V_R = 600\text{V}$ $T_j = 25^\circ\text{C}$		32	nC
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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.

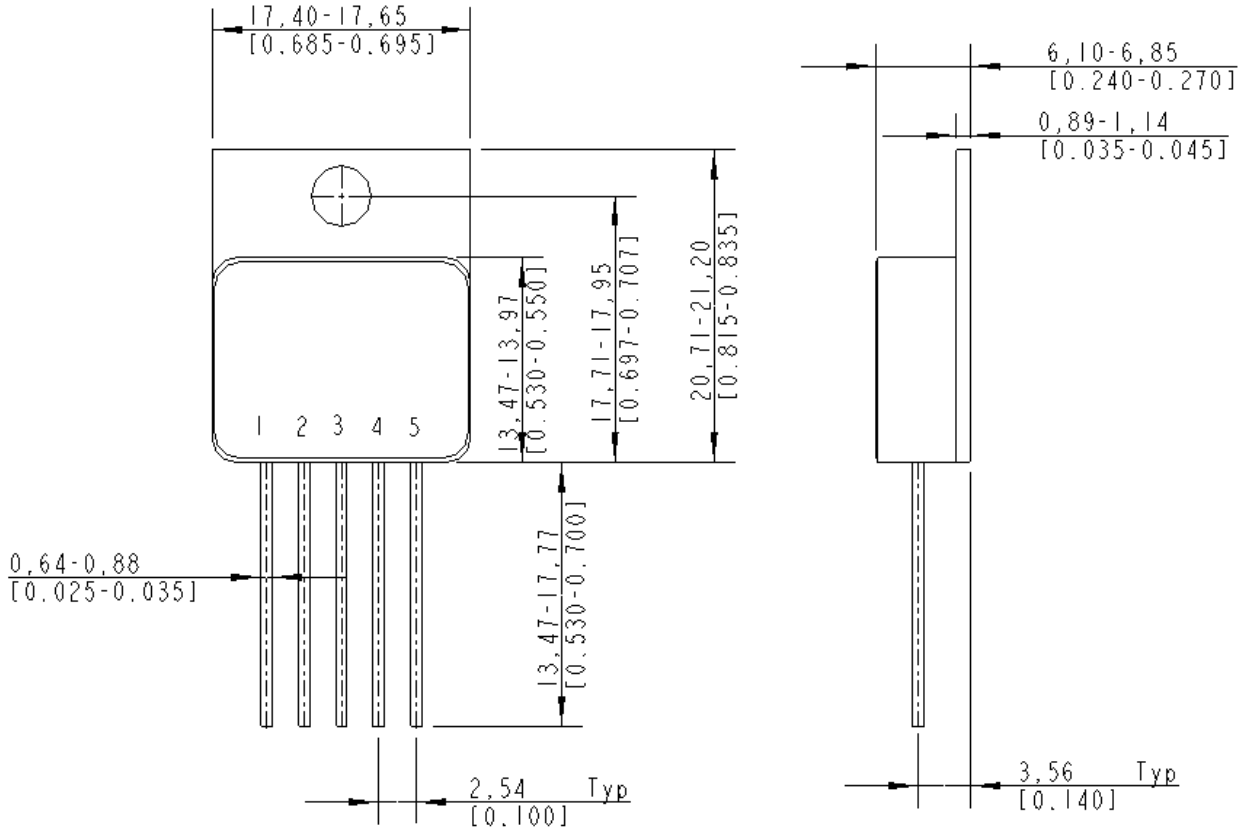


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# ULTRAFAST RECOVERY POWER RECTIFIER DIODE SML010FBDH06

## 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

