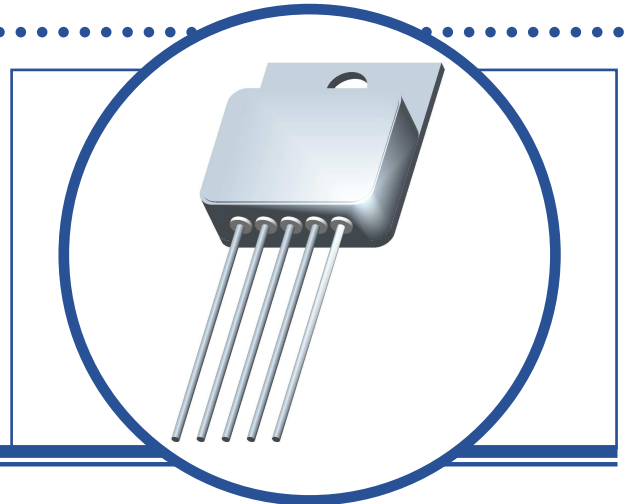


SILICON CARBIDE POWER SCHOTTKY RECTIFIER DIODE BRIDGE

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 2.0	2.2 2.7	V
I_R	Reverse Current	$V_R = V_{RRM}$ $T_c = 175^\circ\text{C}$		10	100 1000	μA

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 $\leq 300\mu\text{s}$, $\delta \leq 2\%$

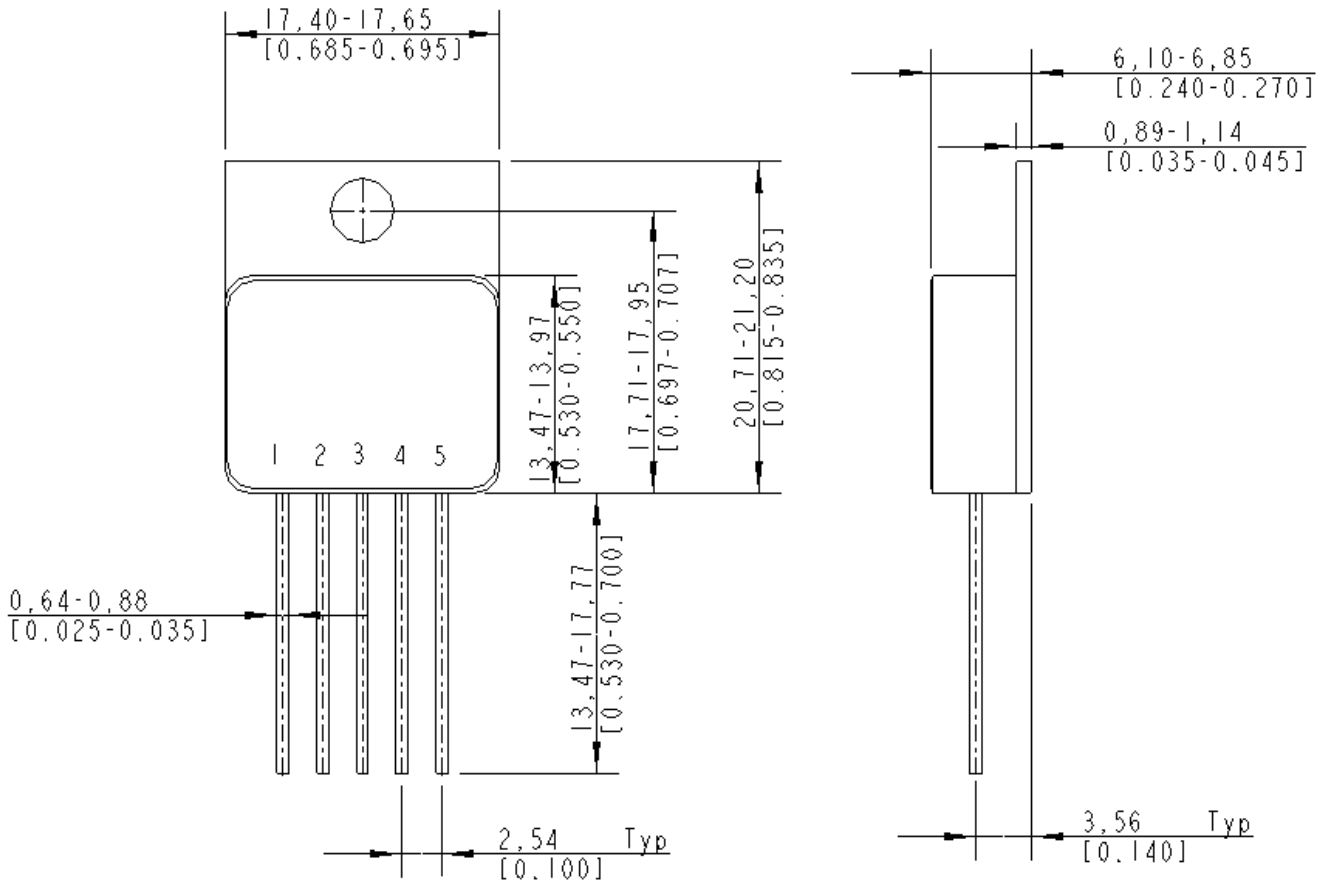
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ULTRAFAST RECOVERY POWER RECTIFIER DIODE SML010FBDH06

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

