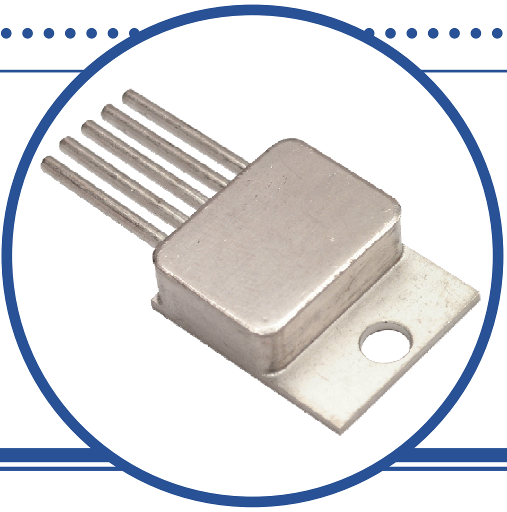
SILICON CARBIDE SCHOTTKY DIODE BRIDGE

TT electronics
Semelab Limited

SML10SC12CIC-FB

- V_{RRM} = 1200V
- $I_{F(AVG)}$ = 8A
- Full Bridge Rectifier Configuration
- Hermetic T258D Package with Ceramic Seals
- Zero Reverse Recovery Current
- Zero Reverse Recovery Voltage
- High Speed Switching
- Screening Options Available



ABSOLUTE MAXIMUM RATINGS (Per Die, T_{case} = 25°C unless otherwise stated)

V_{RRM}	Repetitive Peak Reverse Voltage	1200V
V_{RSM}	Surge Peak Reverse Voltage	1200V
V_{DC}	DC Blocking Voltage	1200V
$I_{F(AVG)}$	Maximum Average Forward Current	8A
I_{FRM}	Repetitive Peak Forward Surge Current(1)	50A
T_{stg}	Storage Temperature Range	-65°C to +200°C
T_J	Operating Temperature Range	-65°C to +200°C

THERMAL CHARACTERISTICS

Symbol	Parameters	Max	Units
$R_{\theta JC}$	Thermal Resistance, Junction To Case (Single diode)	3.25	°C/W

ELECTRICAL CHARACTERISTICS (Per Diode, T_{case} = 25°C unless otherwise stated)

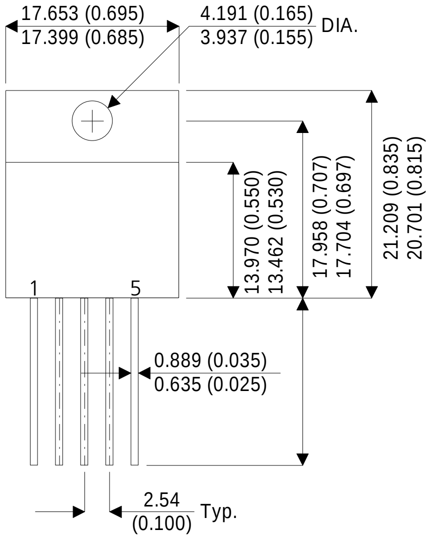
Symbol	Parameters	Test Conditions		Min	Typ	Max	Units
V_F	Forward Voltage(2)	I_F = 8A				2.25	V
			T_{amb} = 150°C			3.0	
I_R	Maximum Reverse Current(2)	$V_R = V_{RWM}$				200	µA
			T_{amb} = 150°C			1.0	mA

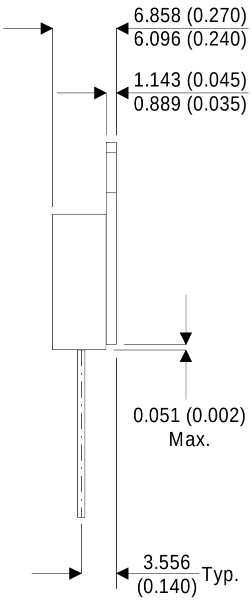
Notes:

1) T_C=25°C, t_p=10ms, Half Sine Wave
2) Pulse width ≤ 300 µs; Duty Cycle ≤ 2%

MECHANICAL DATA

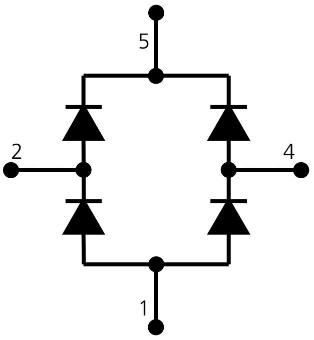
Dimensions in mm (inches)





CIRCUIT CONFIGUTATION

Pin numbering from left to right



TO258D (MO-078AA)

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

APPLICATIONS

- Switch Mode Power Supplies
- Power Factor Correction
- Motor Drives