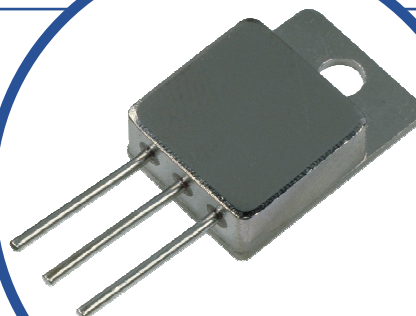


DUAL COMMON ANODE SILICON CARBIDE SCHOTTKY DIODE

SML20SIC06M3A

- $V_{R(max)} = 600V$
- $I_{F(avg)} = 20A$
- $V_{F(typ)} = 1.8V$
- Metal Hermetic TO-254 Package
- Dual Common Anode Configuration
- High Reliability Screening Options Available
- Effective Zero Forward and Reverse Recovery



ABSOLUTE MAXIMUM RATINGS ($T_C = 25^\circ C$ (per diode) unless otherwise stated)

V_{RRM}	Peak Repetitive Reverse Voltage	600V
V_{RSM}	Surge Peak Reverse Voltage	600V
$I_{F(AVG)}$	Average Forward Current	20A
I_{FRM}	Repetitive Peak Forward Current ⁽¹⁾ (per diode)	50A
I_{FMAX}	Non-Repetitive Peak Forward Current	250A
P_D	Total Power Dissipation (per diode) at $T_C = 25^\circ C$ Derate Above $T_C = 25^\circ C$	100W 0.5W/ $^\circ C$
T_J	Junction Temperature Range	-55 to +225 $^\circ C$
T_{stg}	Storage Temperature Range	-55 to +225 $^\circ C$

THERMAL PROPERTIES(per diode)

Symbols	Parameters	Max.	Unit
$R_{\theta JC}$	Thermal Resistance, Junction To Case (per Diode)	2	$^\circ C/W$

(1) $T_{case} = 25^\circ C$, $T_p = 8.3mS$ Half sine wave $D=0.3$

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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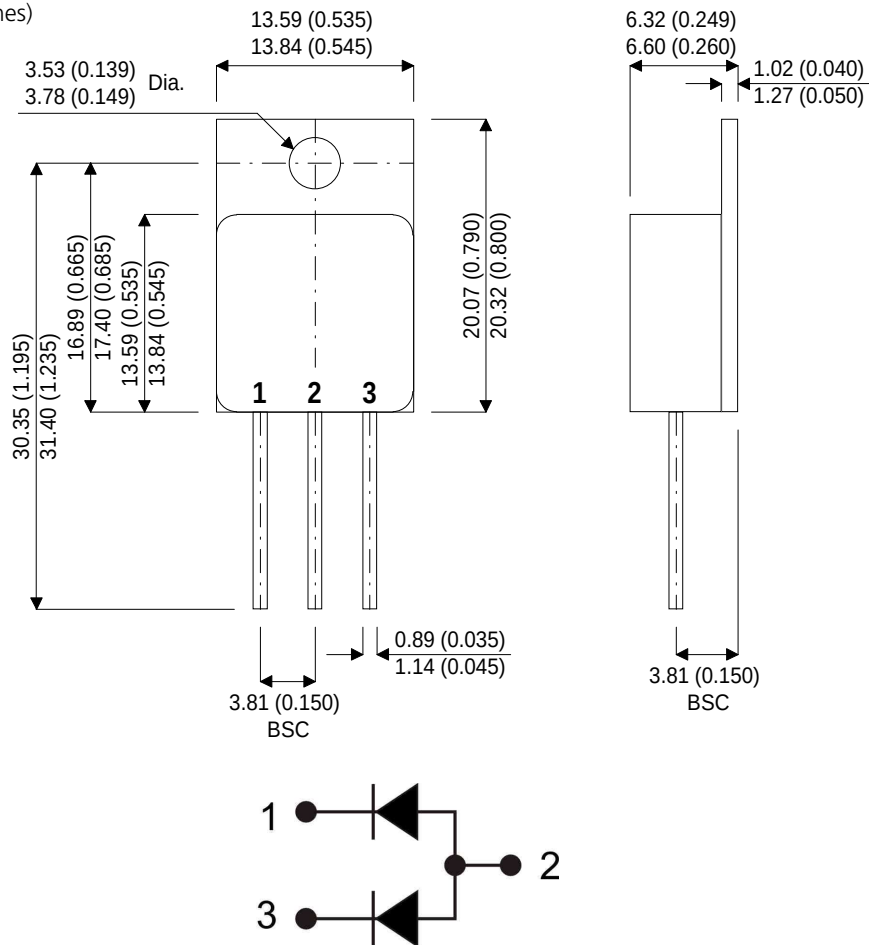
ELECTRICAL CHARACTERISTICS (T _C = 25°C unless otherwise stated Per Side)						
Symbol	Parameters	Test Conditions	Min.	Typ.	Max.	Unit
V _F ⁽¹⁾	Diode Forward Voltage	I _F = 12A		1.5	2	V
		I _F = 20A		1.8	2.5	
		I _F = 20A T _J = 175°C		2.4	3.0	
I _R	Leakage Current	V _R = 600V		10	100	μA
		V _R = 600V T _J = 175°C		5	200	

DYNAMIC CHARACTERISTICS (T _C = 25°C unless otherwise stated Per Side)						
C	Total Capacitance	V _R = 1.0V	f = 1.0MHz		700	pF

Notes
(1) Pulse Width ≤ 300us, δ ≤ 2%

MECHANICAL DATA

Dimensions in mm (inches)



(TO-254AA) METAL PACKAGE

Pin 1 - Cathode 1 Pin 2 - Anode Pin 3 -Cathode 2