

Product Overview

Features

- High voltage 600V isolation
- High current 10A
- High temperature 210°C
- BeO free and RoHS compliant
- HMP solder tinned leads available
- Electrically isolated flange
- Silicon Carbide (SiC) Schottky diodes exhibit low forward voltage and superior high temperature performance
- No reverse recovery time
- Screening options available
 - Commercial high temperature
 - In accordance with MIL-PRF-19500
 - Other options available on request
- Other packaging options available

Benefits

- Essentially no switching losses
- Higher efficiency
- Reduction of heat sink requirements

Applications

- Harsh environment rectification
- Harsh environment regulators

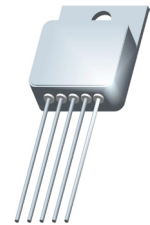


Figure 1: TO-258 5 PIN

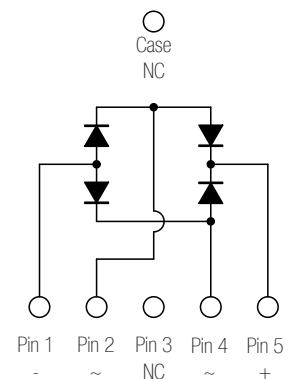


Figure 2: Circuit Diagram

Absolute Maximum Ratings* (Per single diode)

Symbols	Parameters	Values	Units
V_R	DC Reverse Voltage	600	Volts
V_{RRM}	Repetitive Peak Reverse Voltage	600	Volts
$I_{F(AVG)}$	Average Forward Current	10	Amps
I_{FRM}	Repetitive Peak Forward Current ($\tau_p=10ms$, Half Sine Wave)	60	Amps
I_{FSM}	Surge Peak Forward Current ($\tau_p=10\mu s$, Half Sine Wave)	100	Amps
P_D	Total Power Dissipation	29	Watts
T_J	Junction Temperature Range	-55 to +210	°C
T_{stg}	Storage Temperature Range	-55 to +210	°C

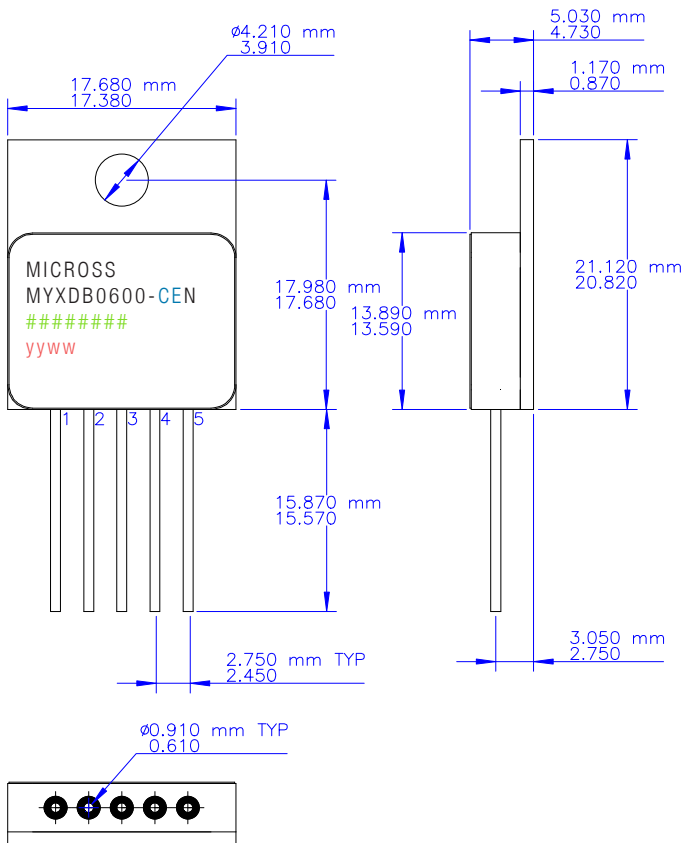
Thermal Properties

Symbols	Parameters	Values	Units
$R_{\theta JC}$	Thermal Resistance, Junction To Case	1.6	°C / Watt

Electrical Characteristics

Symbols	Parameters	Test Conditions	Typ	Max	Units
V _F	Forward Voltage ##	I _F = 10A, T _J = 25°C	2.2	2.5	Volts
		I _F = 10A, T _J = 210°C	3.2	4.1	
I _R	Reverse Current ##	V _R = 600V, T _J = 25°C	10	100	μAmps
		V _R = 600V, T _J = 210°C	140	1000	
Q _C	Total Capacitive Charge ##	V _R = 600V, T _J = 25°C, I _F = 10A, di/dt = 500 A/μs	28		nC
C	Total Capacitance ##	V _R = 0V, T _J = 25°C, f = 1MHz	550		pF
		V _R = 200V, T _J = 25°C, f = 1MHz	65		
		V _R = 400V, T _J = 25°C, f = 1MHz	50		

Calculated per single diode



CE = TO-258 5 PIN
= Batch code
yyww = Date code

yy = year
ww = week

(Font and text colour is not representative of actual parts produced)

Figure 3: Package Dimensions

* Absolute Maximum Ratings Disclaimer

Stresses greater than the values listed under the Absolute Maximum Ratings table may cause permanent damage to the device. These values are stress ratings, functional operation of the device at these or conditions greater than those listed is not implied herein. Exposure to absolute maximum conditions for any duration may affect device reliability and operational life.

Document Title

Silicon Carbide Diode Rectifier Bridge 600 Volt 10 Amp Hermetic MYXDB0600-10CEN

Revision History

Revision #	History	Release Date	Status
1.0	Initial release	March 2014	Preliminary