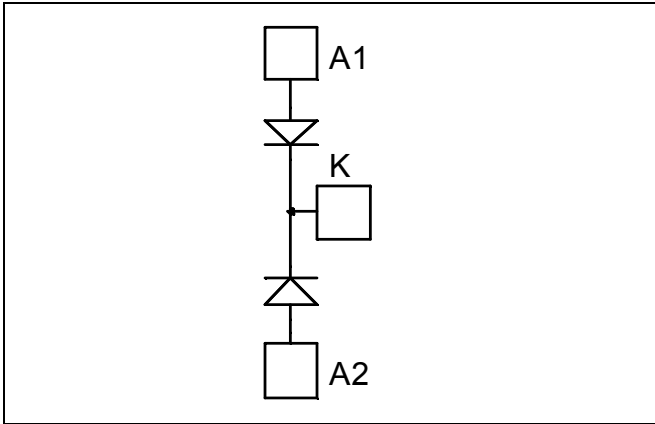


Dual Common Cathode diodes Power Module

$V_{RRM} = 200V$
 $I_C = 400A @ T_c = 80^{\circ}C$



Application

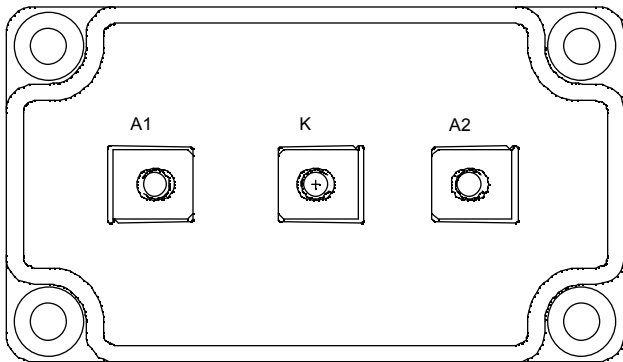
- Uninterruptible Power Supply (UPS)
- Induction heating
- Welding equipment
- High speed rectifiers

Features

- Ultra fast recovery times
- Soft recovery characteristics
- High blocking voltage
- High current
- Low leakage current
- Very low stray inductance
 - Symmetrical design
 - M5 power connectors
- High level of integration

Benefits

- Outstanding performance at high frequency operation
- Low losses
- Low noise switching
- Direct mounting to heatsink (isolated package)
- Low junction to case thermal resistance
- RoHS Compliant



Absolute maximum ratings

Symbol	Parameter	Max ratings	Unit
V_R	Maximum DC reverse Voltage	200	V
V_{RRM}	Maximum Peak Repetitive Reverse Voltage		
$I_{F(AV)}$	Maximum Average Forward Current	Duty cycle = 50% $T_C = 25^{\circ}C$	500
		$T_C = 80^{\circ}C$	400
$I_{F(RMS)}$	RMS Forward Current	Duty cycle = 50% $T_C = 45^{\circ}C$	500
I_{FSM}	Non-Repetitive Forward Surge Current	8.3ms $T_C = 45^{\circ}C$	3000

CAUTION: These Devices are sensitive to Electrostatic Discharge. Proper Handling Procedures Should Be Followed. See application note APT0502 on www.microsemi.com

All ratings @ $T_j = 25^\circ\text{C}$ unless otherwise specified

Electrical Characteristics

<i>Symbol</i>	<i>Characteristic</i>	<i>Test Conditions</i>		<i>Min</i>	<i>Typ</i>	<i>Max</i>	<i>Unit</i>
V_F	Diode Forward Voltage	$I_F = 400\text{A}$			1.0	1.1	V
		$I_F = 800\text{A}$			1.4		
		$I_F = 400\text{A}$	$T_j = 125^\circ\text{C}$		0.9		
I_{RM}	Maximum Reverse Leakage Current	$V_R = 200\text{V}$	$T_j = 25^\circ\text{C}$			750	μA
			$T_j = 125^\circ\text{C}$			1000	
C_T	Junction Capacitance	$V_R = 200\text{V}$			1600		pF

Dynamic Characteristics

<i>Symbol</i>	<i>Characteristic</i>	<i>Test Conditions</i>		<i>Min</i>	<i>Typ</i>	<i>Max</i>	<i>Unit</i>
t_{rr}	Reverse Recovery Time	$I_F = 1\text{A}, V_R = 30\text{V}$ $di/dt = 400\text{A}/\mu\text{s}$	$T_j = 25^\circ\text{C}$		39		ns
t_{rr}	Reverse Recovery Time	$I_F = 400\text{A}$ $V_R = 133\text{V}$ $di/dt = 800\text{A}/\mu\text{s}$	$T_j = 25^\circ\text{C}$		60		ns
			$T_j = 125^\circ\text{C}$		110		
Q_{rr}	Reverse Recovery Charge		$T_j = 25^\circ\text{C}$		800		nC
			$T_j = 125^\circ\text{C}$		3360		
I_{RRM}	Reverse Recovery Current		$T_j = 25^\circ\text{C}$		24		A
			$T_j = 125^\circ\text{C}$		60		
t_{rr}	Reverse Recovery Time	$I_F = 400\text{A}$ $V_R = 133\text{V}$ $di/dt = 4000\text{A}/\mu\text{s}$	$T_j = 125^\circ\text{C}$		80		ns
Q_{rr}	Reverse Recovery Charge				7.64		μC
I_{RRM}	Reverse Recovery Current				176		A

Thermal and package characteristics

<i>Symbol</i>	<i>Characteristic</i>	<i>Min</i>	<i>Typ</i>	<i>Max</i>	<i>Unit</i>	
R_{thJC}	Junction to Case Thermal Resistance			0.14	$^\circ\text{C}/\text{W}$	
V_{ISOL}	RMS Isolation Voltage, any terminal to case $t = 1\text{ min}$, $I_{isol} < 1\text{mA}$, 50/60Hz	2500			V	
T_j	Operating junction temperature range	-40		150	$^\circ\text{C}$	
T_{STG}	Storage Temperature Range	-40		125		
T_C	Operating Case Temperature	-40		100		
Torque	Mounting torque	To heatsink	M6	3	5	N.m
		For terminals	M5	2	3.5	
Wt	Package Weight			280	g	

Typical Performance Curve
