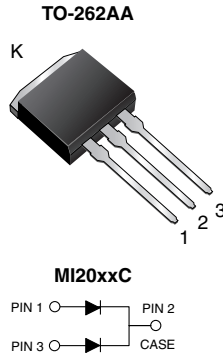


## Dual Common-Cathode Schottky Rectifier



### FEATURES

- Guardring for overvoltage protection
- Lower power losses, high efficiency
- Low forward voltage drop
- High forward surge capability
- High frequency operation
- Solder Dip 260 °C, 40 seconds
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



### TYPICAL APPLICATIONS

For use in low voltage, high frequency rectifier of switching mode power supplies, free-wheeling diodes, oring diodes, dc-to-dc converters or polarity protection applications.

### MECHANICAL DATA

**Case:** TO-262AA

Epoxy meets UL 94V-0 flammability rating

**Terminals:** Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D

E3 suffix for commercial grade

**Polarity:** As marked

**Mounting Torque:** 10 in-lbs maximum

MAJOR RATINGS AND CHARACTERISTICS	
$I_{F(AV)}$	10 A x 2
$V_{RRM}$	50 V, 60 V
$I_{FSM}$	150 A
$V_F$ at $I_F = 10$ A	0.570 V
$T_j$ max.	150 °C

MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)				
PARAMETER	SYMBOL	MI2050C	MI2060C	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	60	V
Maximum average forward rectified current (see Fig. 1)	$I_{F(AV)}$	Total device: 10 Per diode: 5.0		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode	$I_{FSM}$	150		A
Peak repetitive reverse current per leg at $t_p = 2$ $\mu$ s, 1 kHz	$I_{RRM}$	0.5		A
Voltage rate of change (rated $V_R$ )	dv/dt	10000		V/ $\mu$ s
Operating junction temperature range	$T_J$	- 65 to + 150		°C
Storage temperature range	$T_{STG}$	- 65 to + 175		°C



<b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)						
PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT
Maximum instantaneous forward voltage per diode <sup>(1)</sup>	at $I_F = 5\text{ A}$ $I_F = 10\text{ A}$	$T_j = 25\text{ }^\circ\text{C}$	$V_F$	0.554 0.649	- 0.74	V
	at $I_F = 5\text{ A}$ $I_F = 10\text{ A}$	$T_j = 125\text{ }^\circ\text{C}$		0.484 0.570	- 0.62	
Reverse current per diode <sup>(1)</sup>	at rated $V_R$	$T_j = 25\text{ }^\circ\text{C}$ $T_j = 125\text{ }^\circ\text{C}$	$I_R$	15 10.8	150 25	$\mu\text{A}$ mA
Typical junction capacitance	at 4.0 V, 1 MHz		$C_J$	300	-	pF

**Note:**

(1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle

<b>THERMAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)					
PARAMETER		SYMBOL	MI2050C	MI2060C	UNIT
Typical thermal resistance	per diode	$R_{\theta JC}$	2.0		$^\circ\text{C/W}$

<b>ORDERING INFORMATION</b>					
PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
TO-262AA	MI2060C-E3/4W	1.456	4W	50/Tube	Tube

## RATINGS AND CHARACTERISTICS CURVES

( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

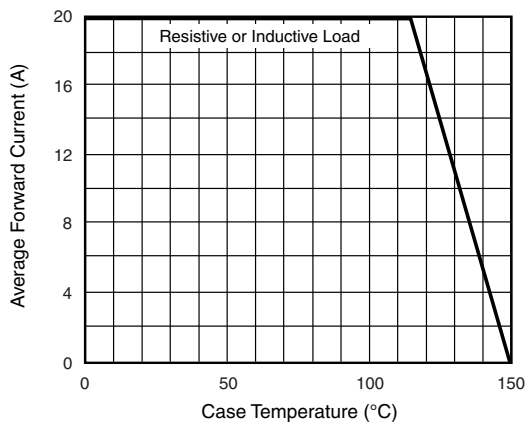


Figure 1. Forward Derating Curve (Total)

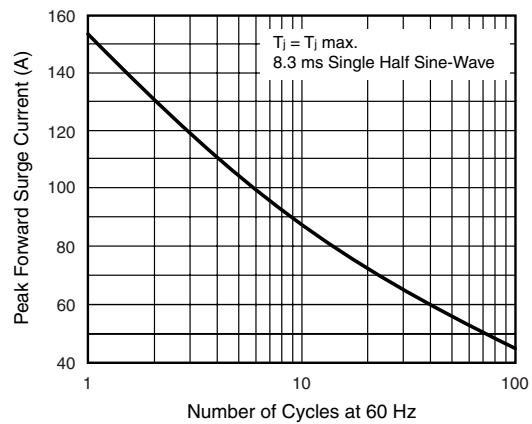


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

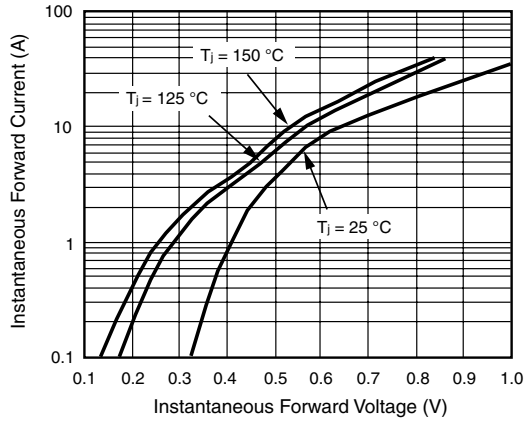


Figure 3. Typical Instantaneous Forward Characteristics Per Diode

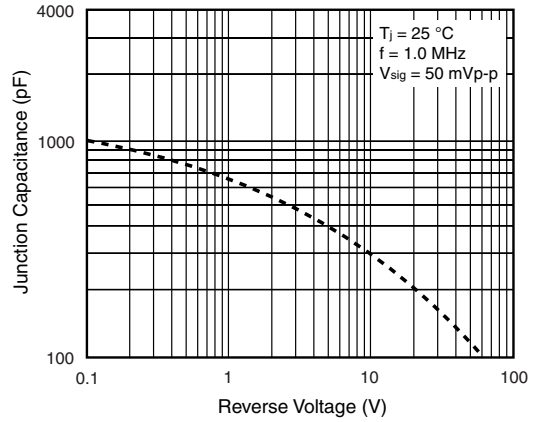


Figure 5. Typical Junction Capacitance Per Diode

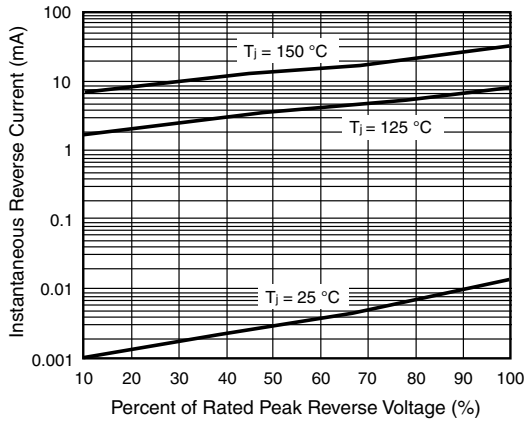


Figure 4. Typical Reverse Characteristics Per Diode

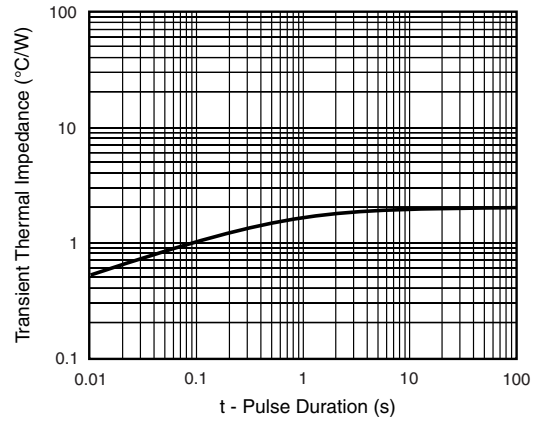
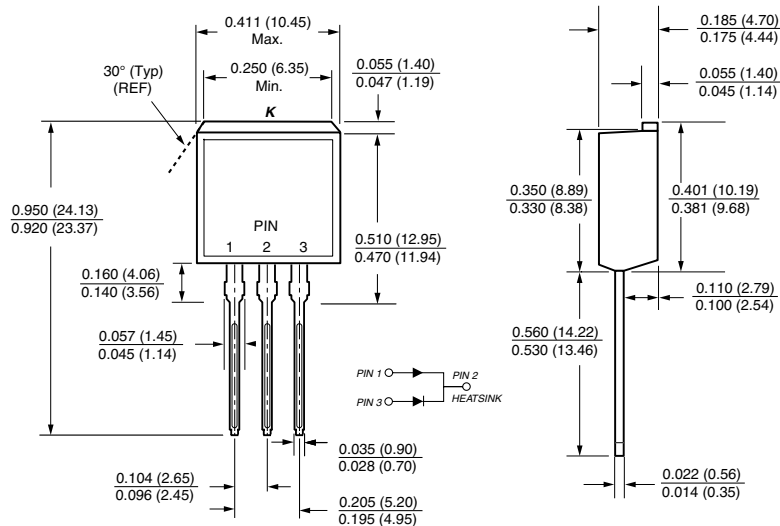


Figure 6. Typical Transient Thermal Impedance Per Diode

## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

### TO-262AA





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