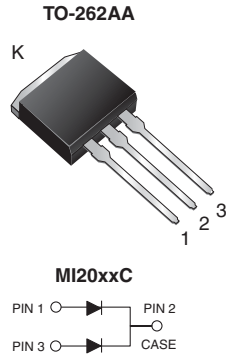


## Dual Common Cathode Schottky Rectifier



### FEATURES

- Power pack
- Guardring for overvoltage protection
- Lower power losses, high efficiency
- Low forward voltage drop
- High forward surge capability
- High frequency operation
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### TYPICAL APPLICATIONS

For use in low voltage, high frequency rectifier of switching mode power supplies, freewheeling diodes, OR-ing diodes, DC/DC converters, or polarity protection application.

### MECHANICAL DATA

**Case:** TO-262AA

Molding compound meets UL 94 V-0 flammability rating  
Base P/N-E3 - RoHS-compliant, commercial grade

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test

**Polarity:** As marked

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

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	2 x 10 A
$V_{RRM}$	50 V, 60 V
$I_{FSM}$	150 A
$V_F$ at $I_F = 10$ A	0.570 V
$T_J$ max.	150 °C
Package	TO-262AA
Diode variations	Common cathode

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 (fig.1)	$I_{F(AV)}$	total device		A
		per diode		
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 per diode	$I_{RRM}$	0.5		A
Voltage rate of change (rated $V_R$ )	$dV/dt$	10 000		V/ $\mu$ s
Operating junction temperature range	$T_J$	- 65 to +150		°C
Storage temperature range	$T_{STG}$	- 65 to +175		°C



ELECTRICAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	TEST CONDITIONS		TYP.	MAX.	UNIT
Maximum instantaneous forward voltage per diode	V <sub>F</sub> (1)	I <sub>F</sub> = 5 A	T <sub>J</sub> = 25 °C	0.554	-	V
		I <sub>F</sub> = 10 A	T <sub>J</sub> = 125 °C	0.649	0.74	
		I <sub>F</sub> = 5 A	T <sub>J</sub> = 25 °C	0.484	-	
		I <sub>F</sub> = 10 A	T <sub>J</sub> = 125 °C	0.570	0.62	
Reverse current per diode	I <sub>R</sub> (2)	rated V <sub>R</sub>		T <sub>J</sub> = 25 °C	15	μA
				T <sub>J</sub> = 100 °C	10.8	25
Typical junction capacitance	C <sub>J</sub>	4.0 V, 1 MHz		300	-	pF

**Notes**

- (1) Pulse test: 300 μs pulse width, 1 % duty cycle
- (2) Pulse test: Pulse width ≤ 40 ms

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)				
PARAMETER	SYMBOL	MI2050C	MI2060C	UNIT
Typical thermal resistance per diode	R <sub>θJC</sub>	2.0		°C/W

ORDERING INFORMATION (Example)					
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<sub>A</sub> = 25 °C unless otherwise noted)

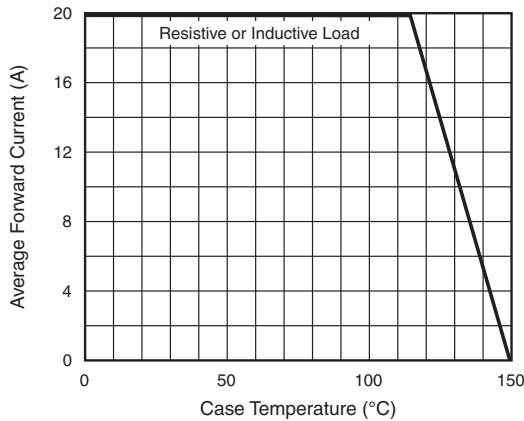


Fig. 1 - Forward Current Derating Curve

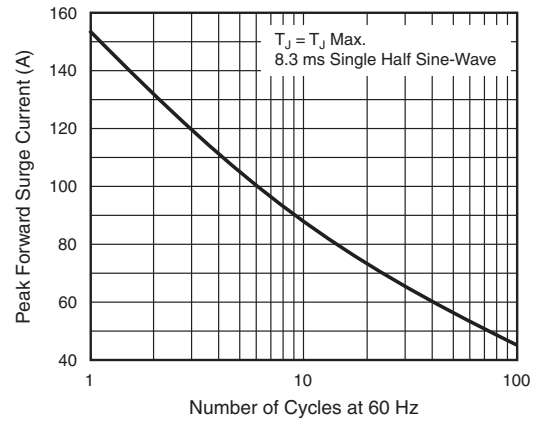


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge pCurrent Per Diode

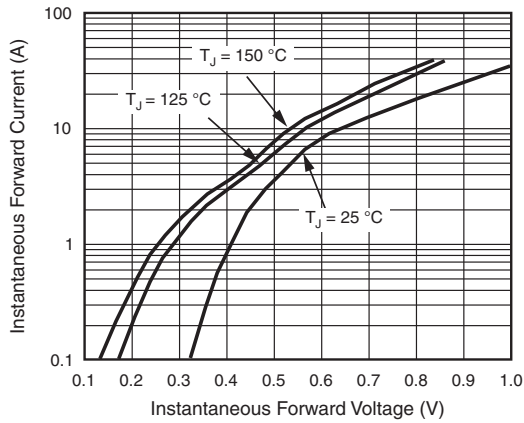


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

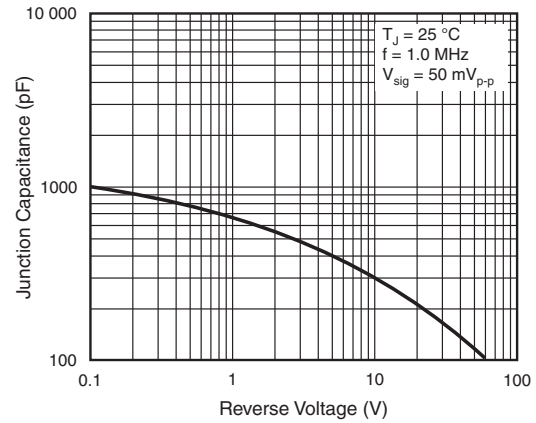


Fig. 5 - Typical Junction Capacitance Per Diode

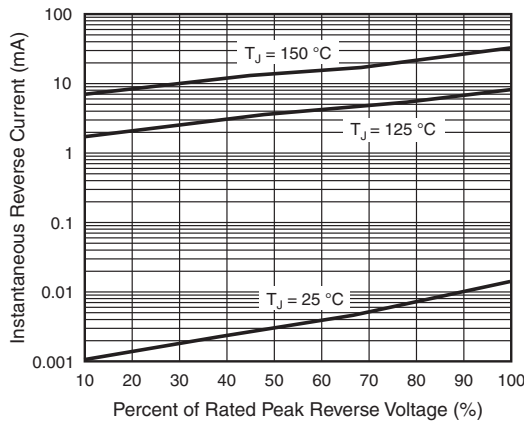


Fig. 4 - Typical Reverse Characteristics Per Diode

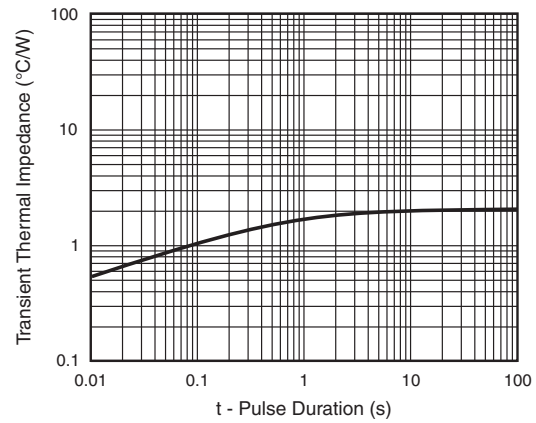
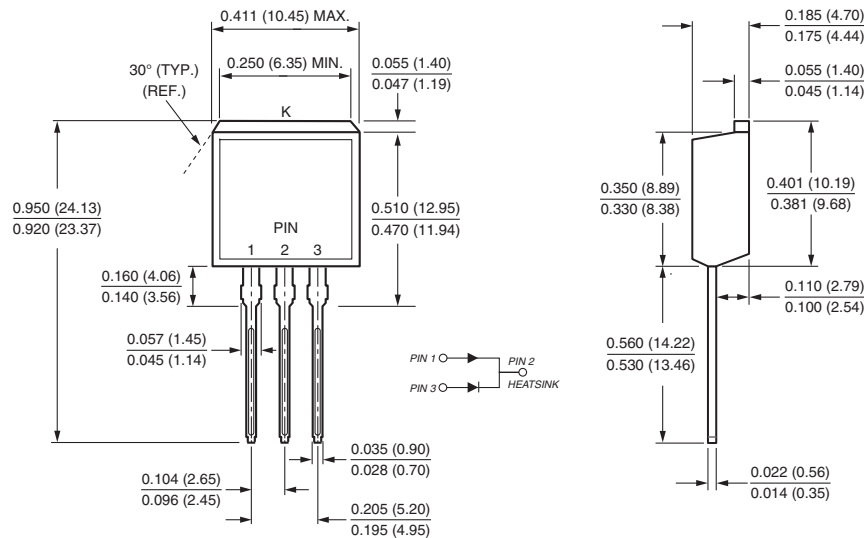


Fig. 6 - Typical Transient Thermal Impedance Per Diode

**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

**TO-262AA**





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