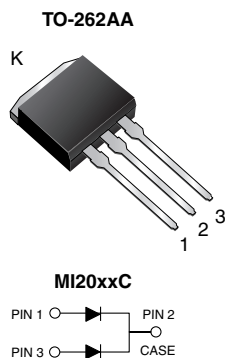


Dual Common Cathode Schottky Rectifier



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


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)	total device per diode I _{F(AV)}	20		A
		10		
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 μs, 1 kHz per diode	I _{RRM}	0.5		A
Voltage rate of change (rated V _R)	dV/dt	10 000		V/μs
Operating junction temperature range	T _J	- 65 to +150		°C
Storage temperature range	T _{STG}	- 65 to +175		°C



ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)						
PARAMETER	SYMBOL	TEST CONDITIONS		TYP.	MAX.	UNIT
Maximum instantaneous forward voltage per diode	$V_F^{(1)}$	$I_F = 5\text{ A}$	$T_J = 25\text{ }^{\circ}\text{C}$	0.554	-	V
		$I_F = 10\text{ A}$	$T_J = 125\text{ }^{\circ}\text{C}$	0.649	0.74	
		$I_F = 5\text{ A}$	$T_J = 25\text{ }^{\circ}\text{C}$	0.484	-	
		$I_F = 10\text{ A}$	$T_J = 125\text{ }^{\circ}\text{C}$	0.570	0.62	
Reverse current per diode	$I_R^{(2)}$	rated V_R	$T_J = 25\text{ }^{\circ}\text{C}$	15	150	μA
			$T_J = 100\text{ }^{\circ}\text{C}$	10.8	25	mA
Typical junction capacitance	C_J	4.0 V, 1 MHz		300	-	pF

Notes(1) Pulse test: 300 μs pulse width, 1 % duty cycle(2) Pulse test: Pulse width $\leq 40\text{ ms}$

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

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

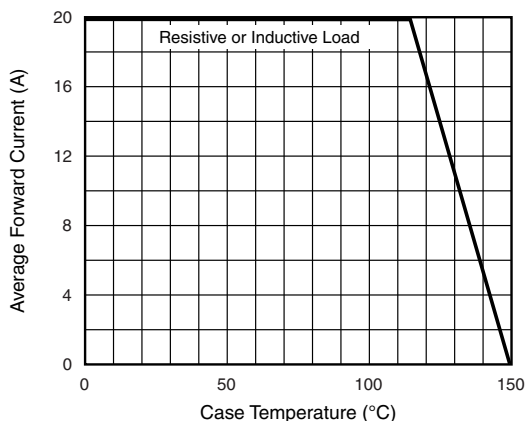
RATINGS AND CHARACTERISTICS CURVES($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

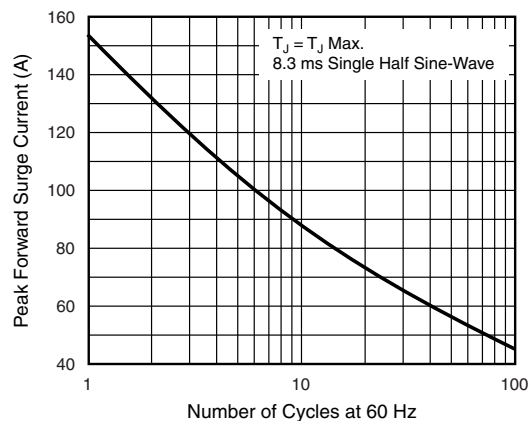


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge pCurrent Per Diode

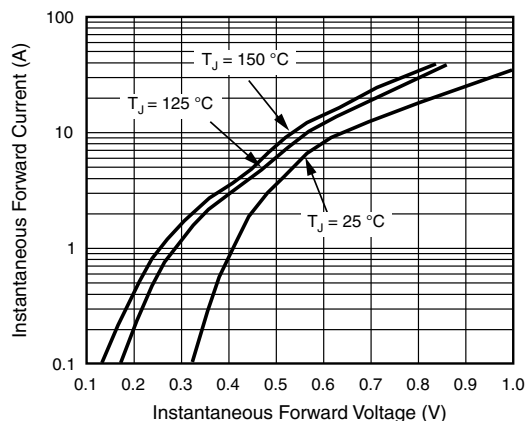


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

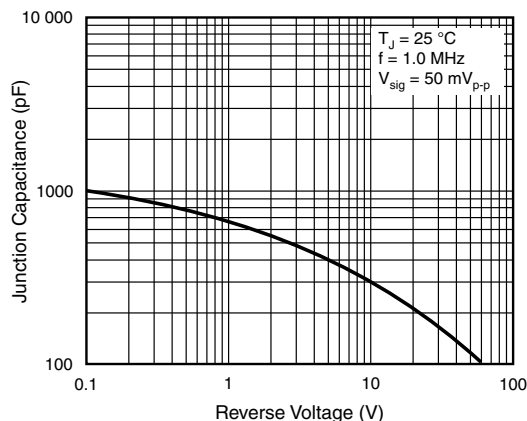


Fig. 5 - Typical Junction Capacitance Per Diode

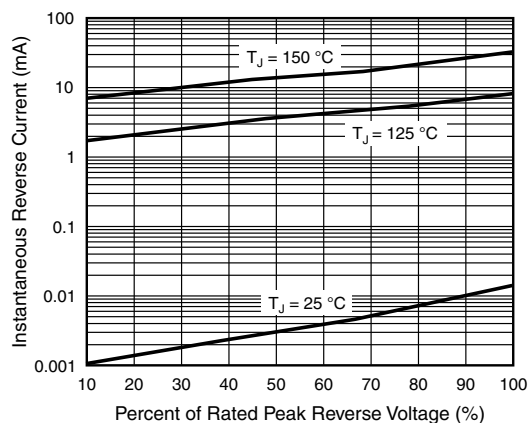


Fig. 4 - Typical Reverse Characteristics Per Diode

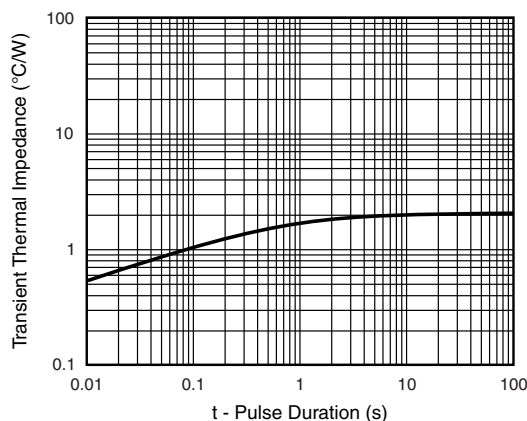
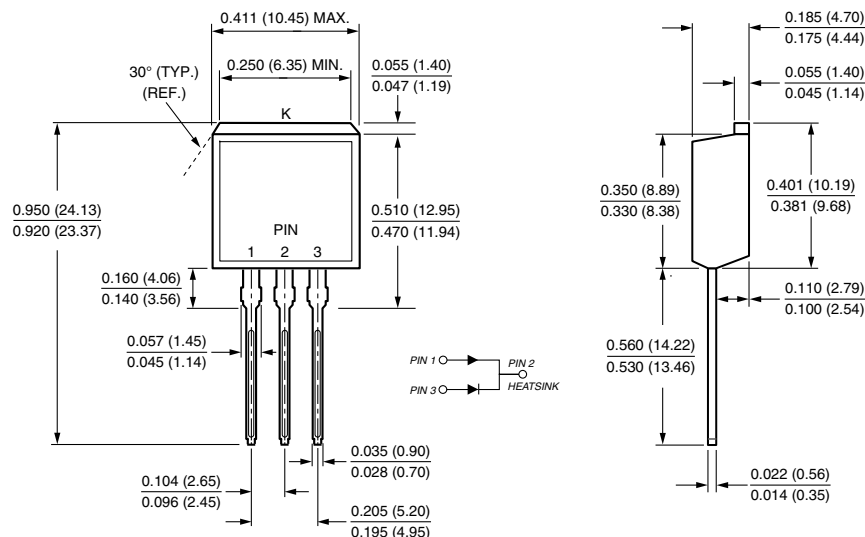


Fig. 6 - Typical Transient Thermal Impedance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

TO-262AA




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