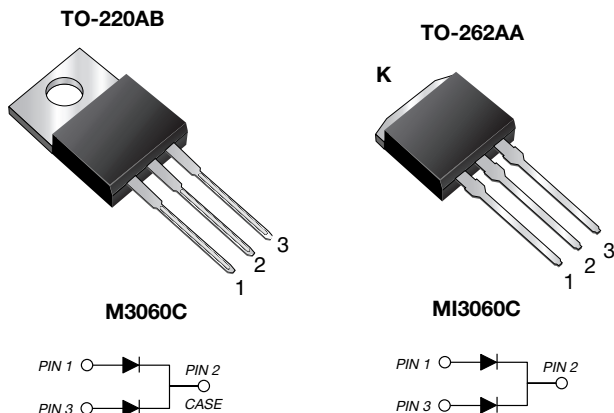


Dual Common Cathode Schottky Rectifier



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, DC/DC converters, or polarity protection application.

MECHANICAL DATA

Case: TO-220AB, 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 15 A
V_{RRM}	60 V
I_{FSM}	160 A
V_F	0.547 V
T_J max.	150 °C
Package	TO-220AB, TO-262AA
Circuit configuration	Common cathode

MAXIMUM RATINGS ($T_A = 25\text{ °C}$ unless otherwise noted)				
PARAMETER	SYMBOL	M3060C	MI3060C	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	60		V
Maximum average forward rectified current	$I_{F(AV)}$	30		A
		15		
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	160		A
Peak repetitive reverse current per diode at $t_p = 2\text{ }\mu\text{s}$, 1 kHz	I_{RRM}	0.5		A
Voltage rate of change (rated V_R)	dV/dt	10 000		V/ μs
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +150		°C

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL	TEST CONDITIONS		TYP.	MAX.	UNIT	
Instantaneous forward voltage per diode	V _F ⁽¹⁾	I _F = 5.0 A	T _J = 25 °C	0.482	-	V	
		I _F = 7.5 A		0.520	-		
		I _F = 15 A		0.614	0.72		
		I _F = 5.0 A	T _J = 125 °C	0.387	-		
		I _F = 7.5 A		0.443	-		
		I _F = 15 A		0.547	0.62		
Reverse current per diode	I _R ⁽²⁾	rated V _R	T _J = 25 °C	50	350	μA	
			T _J = 125 °C	23	45	mA	
Typical junction capacitance per diode	C _J	4.0 V, 1 MHz	T _J = 25 °C	540	-	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	M3060C	MI3060C	UNIT
Thermal resistance per diode	$R_{\theta JC}$	2.0	2.0	$^{\circ}\text{C/W}$

ORDERING INFORMATION (Example)					
PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
TO-220AB	M3060C-E3/4W	1.85	4W	50/tube	Tube
TO-262AA	MI3060C-E3/4W	1.46	4W	50/tube	Tube

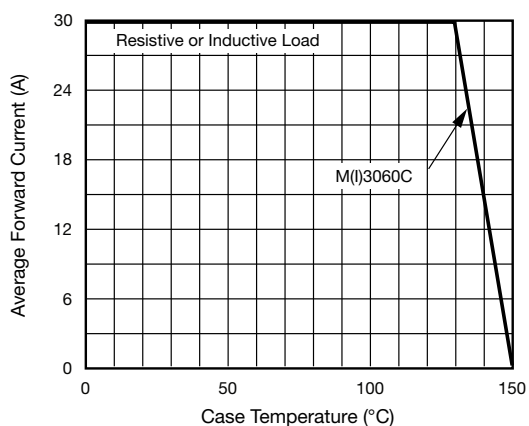
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)


Fig. 1 - Forward Current Derating Curve

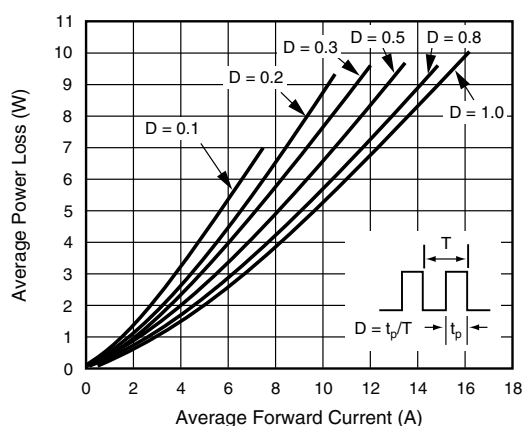


Fig. 2 - Forward Power Loss Characteristics Per Diode

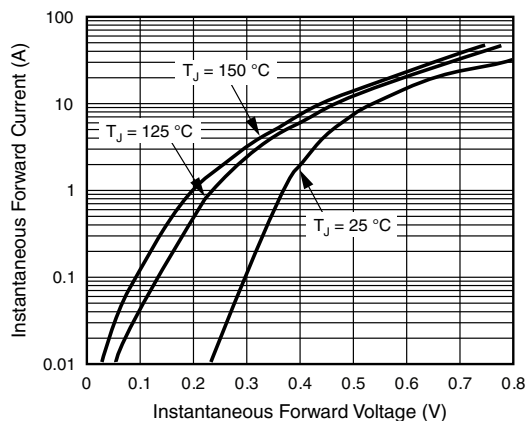


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

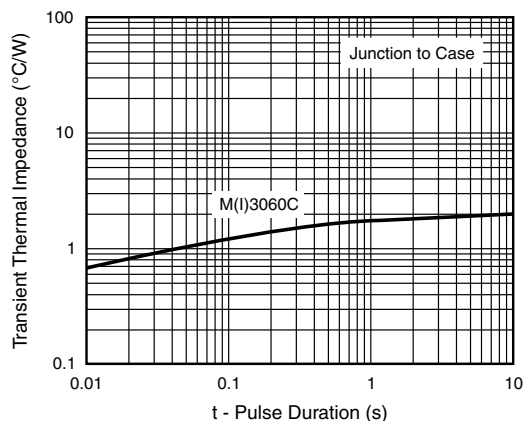


Fig. 6 - Typical Transient Thermal Impedance Per Diode

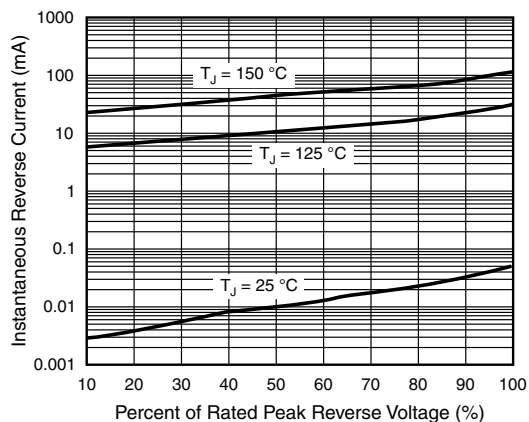


Fig. 4 - Typical Reverse Characteristics Per Diode

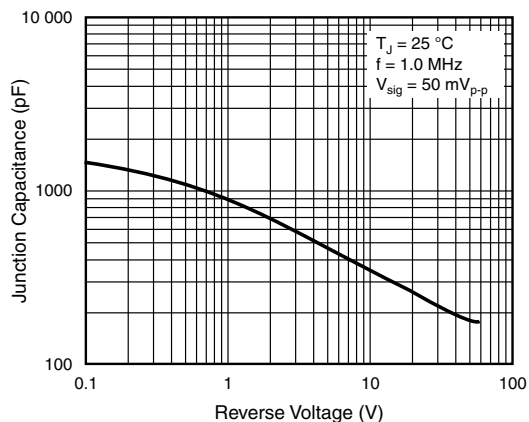
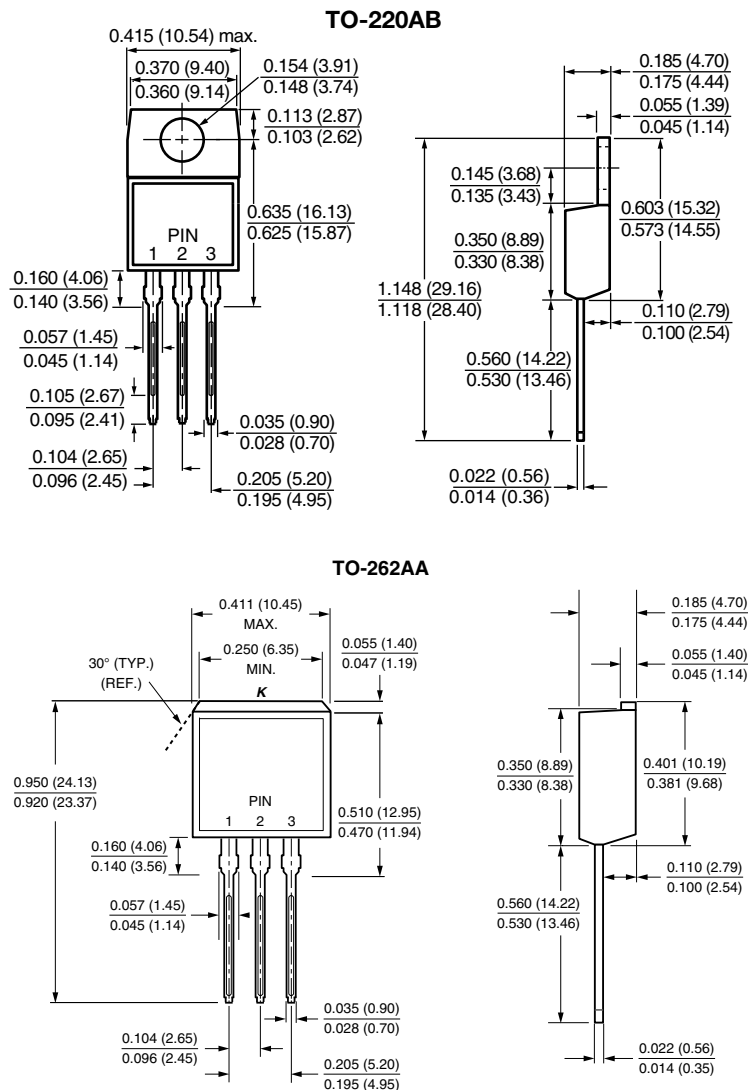


Fig. 5 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)




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