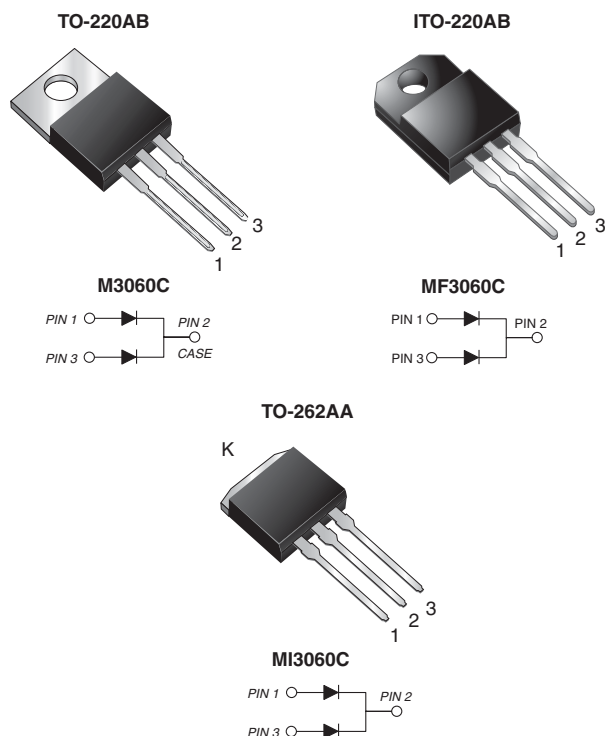


Dual Common Cathode Schottky Rectifier



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, ITO-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, ITO-220AB, TO-262AA
Diode variations	Dual Common Cathode

MAXIMUM RATINGS ($T_A = 25$ °C unless otherwise noted)

PARAMETER	SYMBOL	M3060C	MF3060C	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 $t_p = 2 \mu s, 1 \text{ kHz}$	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			$^{\circ}C$
Isolation voltage from terminal to heatsink with $t = 1 \text{ min}$	V_{AC}	1500			V

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	MF3060C	MI3060C	UNIT
Thermal resistance per diode	$R_{\theta JC}$	2.0	5.5	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
ITO-220AB	MF3060C-E3/4W	1.75	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)

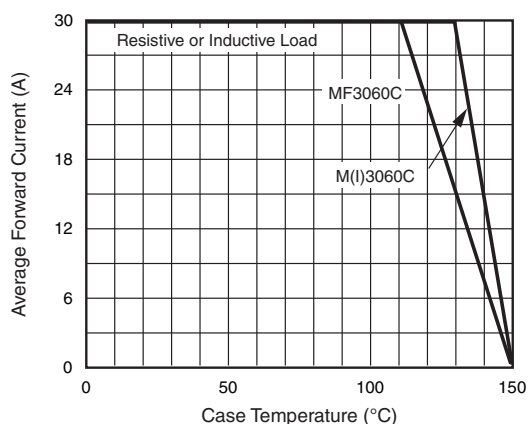


Fig. 1 - Forward Current Derating Curve

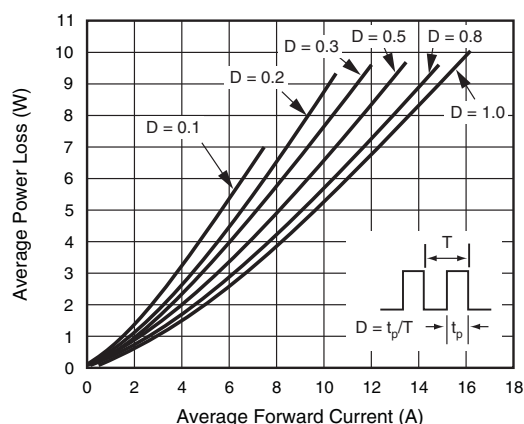
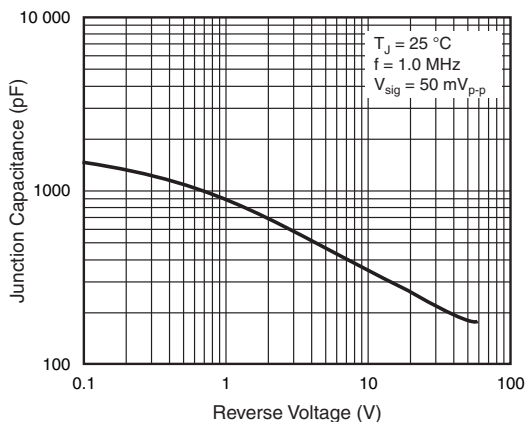
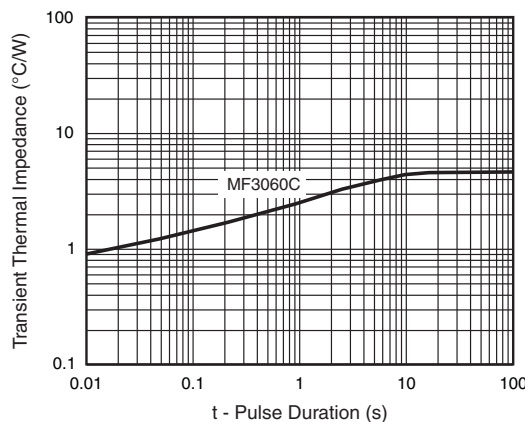
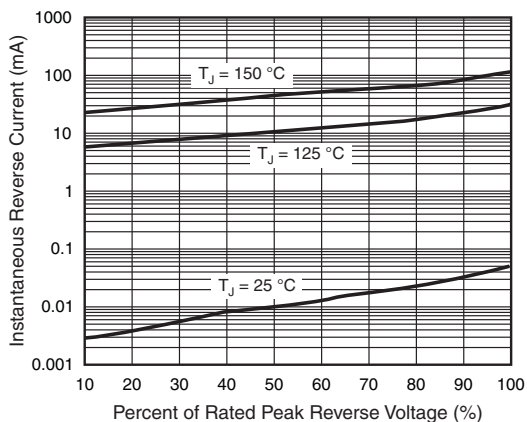
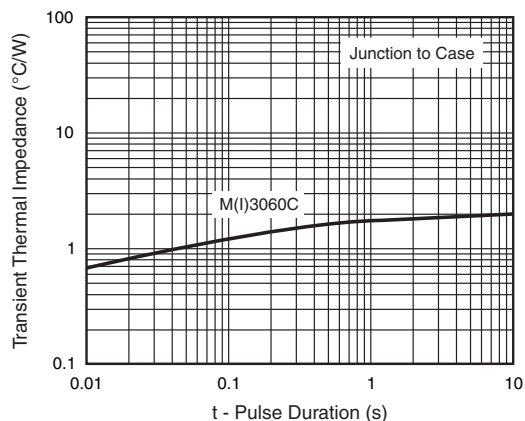
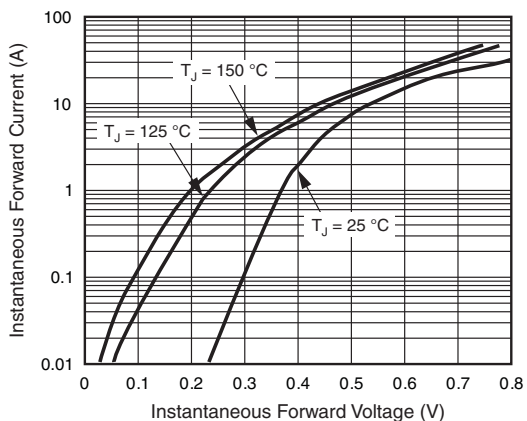


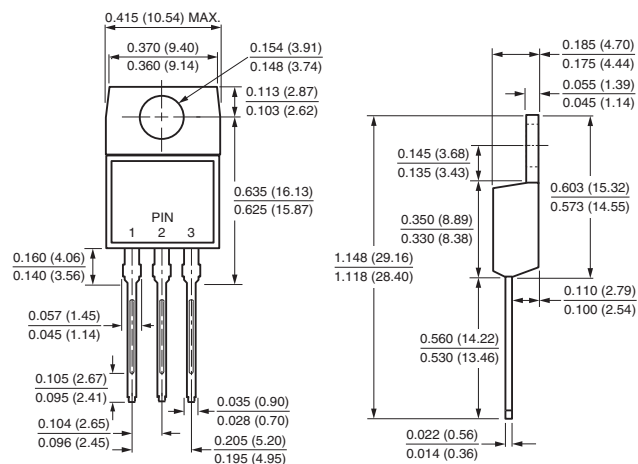
Fig. 2 - Forward Power Loss Characteristics Per Diode



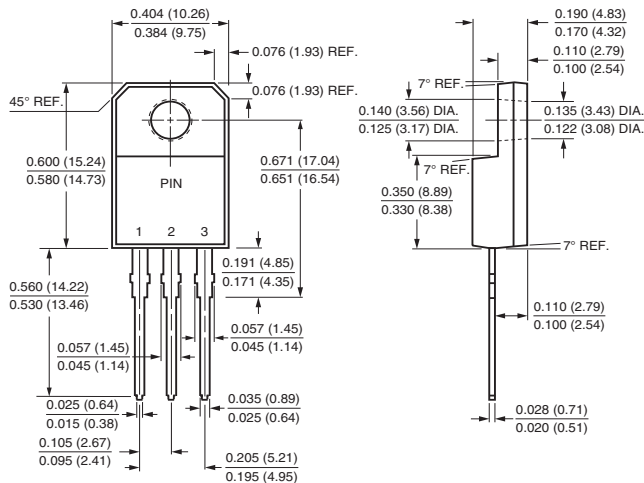


PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

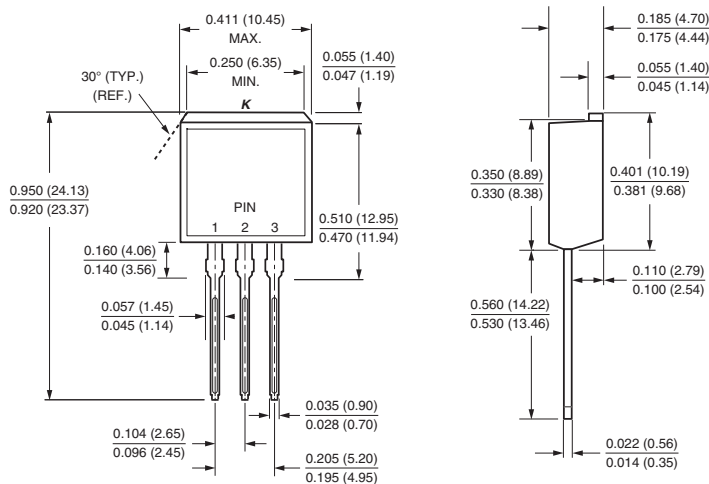
TO-220AB



ITO-220AB



TO-262AA





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