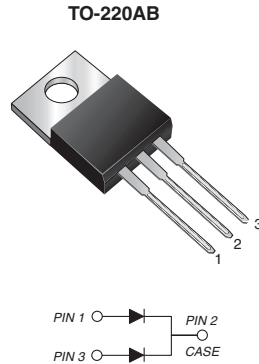


Dual Common Cathode Schottky Rectifier



FEATURES

- Power pack
- Guardring for overvoltage protection
- Lower power losses, high efficiency
- Low forward voltage drop
- High forward surge capability
- High frequency operation
- Solder bath temperature 275 °C maximum, 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, DC/DC converters, or polarity protection application.

MECHANICAL DATA

Case: TO-220AB

Epoxy meets UL 94V-0 flammability rating

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

E3 suffix for consumer grade, 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}	45 V
E_{AS}	20 mJ
I_{FSM}	280 A
V_F at $I_F = 15 A$	0.46 V
T_J max.	150 °C
Package	TO-220AB
Circuit configuration	Common cathode

MAXIMUM RATINGS ($T_A = 25\text{ °C}$ unless otherwise noted)			
PARAMETER	SYMBOL	M30L45C	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	45	V
Maximum average forward rectified current (fig.1)	$I_{F(AV)}$	total device	30
		per diode	15
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	280	A
Peak repetitive reverse current per diode at $t_p = 2\ \mu s$, 1 kHz	I_{RRM}	1.0	A
Non-repetitive avalanche energy at 25 °C, $I_{AS} = 2 A$, per diode	E_{AS}	20	mJ
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)						
PARAMETER	SYMBOL	TEST CONDITIONS	TYP.	MAX.	UNIT	
Instantaneous forward voltage per diode ⁽¹⁾	V_F	$T_A = 25\text{ }^\circ\text{C}$	$I_F = 8\text{ A}$	0.45	-	V
			$I_F = 15\text{ A}$	0.52	0.60	
			$I_F = 30\text{ A}$	0.67	-	
		$T_A = 125\text{ }^\circ\text{C}$	$I_F = 8\text{ A}$	0.36	-	
			$I_F = 15\text{ A}$	0.46	0.50	
			$I_F = 30\text{ A}$	0.63	-	
Reverse current per diode ⁽²⁾	I_R	$V_R = 45\text{ V}$	$T_A = 25\text{ }^\circ\text{C}$	210	1000	μA
			$T_A = 125\text{ }^\circ\text{C}$	60	120	mA
Typical junction capacitance per diode	C_J	4.0 V, 1 MHz	750	-	pF	

Note
⁽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	M30L45C	UNIT
Typical thermal resistance per diode	$R_{\theta JC}$	2.0	$^\circ\text{C/W}$

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
M30L45C-E3/4W	2.07	4W	50/tube	Tube

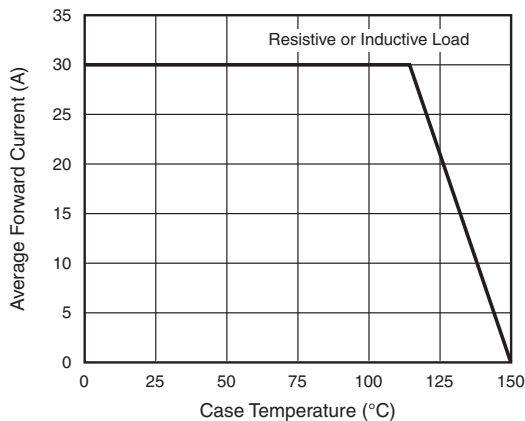
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)


Fig. 1 - Forward Current Derating Curve

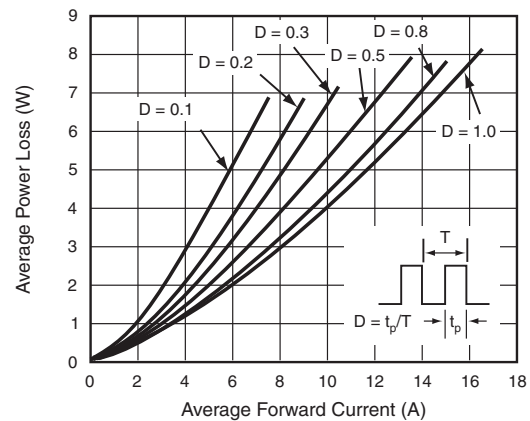


Fig. 2 - Forward Power Loss Characteristics Per Diode

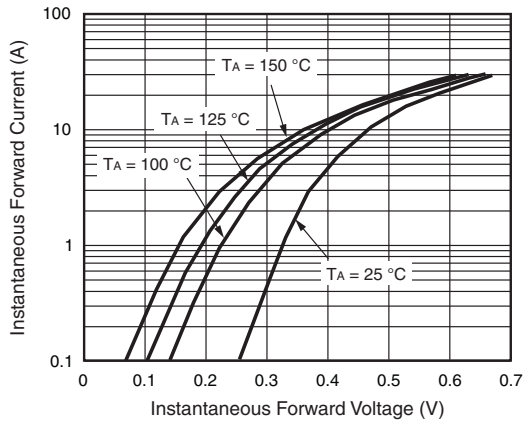


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

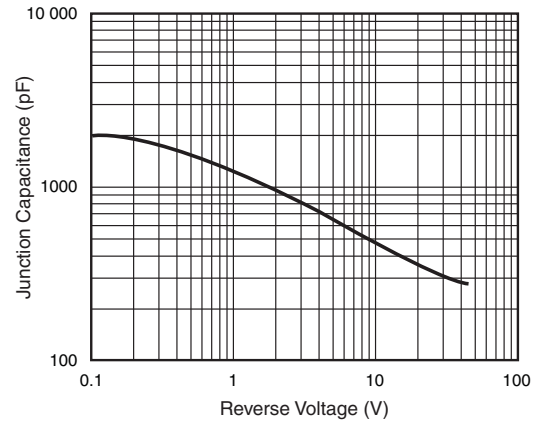


Fig. 5 - Typical Junction Capacitance Per Diode

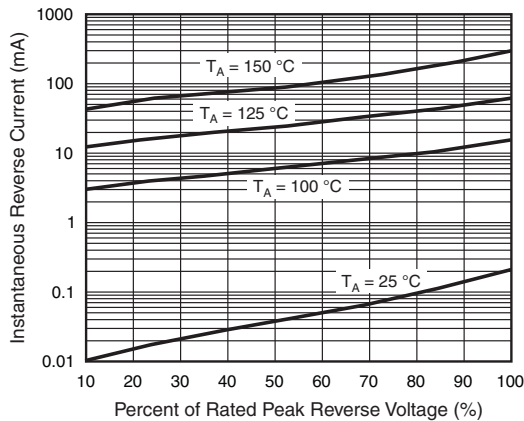


Fig. 4 - Typical Reverse Characteristics Per Diode

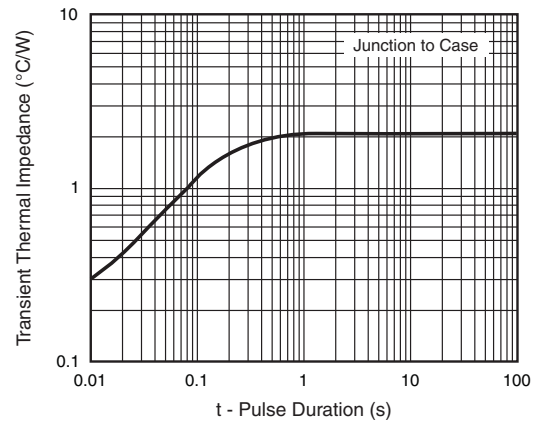
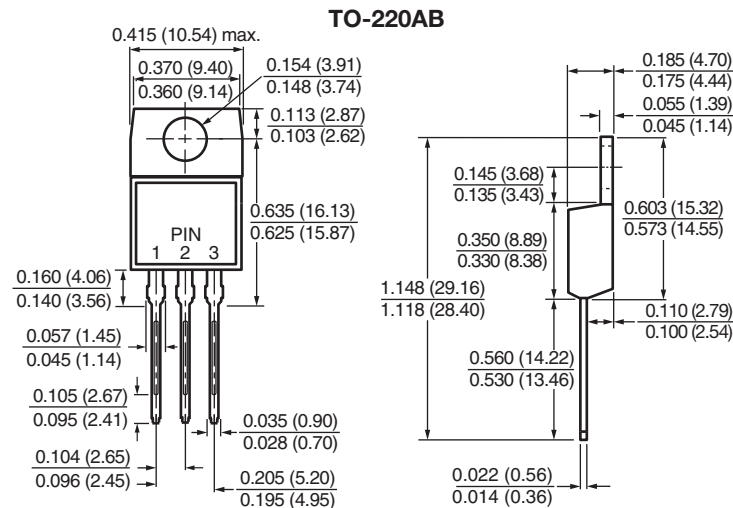


Fig. 6 - Typical Transient Thermal Impedance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

单击下面可查看定价，库存，交付和生命周期等信息

[>>Vishay\(威世\)](#)