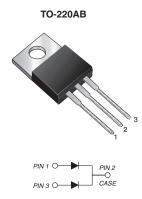
RoHS



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Dual Common Cathode Schottky Rectifier

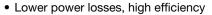


PRIMARY CHARACTERISTICS				
I _{F(AV)}	2 x 15 A			
V_{RRM}	40 V			
E _{AS}	20 mJ			
I _{FSM}	280 A			
V_F at $I_F = 15 A$	0.413 V			
T_J max.	150 °C			
Package	TO-220AB			
Diode variations	Common cathode			

FEATURES







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.vishav.com/doc?99912

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

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

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)				
PARAMETER		SYMBOL	M30L40C	UNIT
Maximum repetitive peak reverse voltage		V _{RRM}	40	V
Maximum average forward rectified current (fig.1)	total device	I _{F(AV)}	30	А
	per diode		15	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode		I _{FSM}	280	А
Peak repetitive reverse current per diode at t _p = 2 μs, 1 kHz		I _{RRM}	1.0	Α
Non-repetitive avalanche energy at 25 °C, I _{AS} = 2 A, L = 10 mH per diode		E _{AS}	20	mJ
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



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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 = 8 A	T _J = 25 °C	0.430	-	V			
		I _F = 15 A		0.490	0.55				
		I _F = 30 A		0.595	-				
		I _F = 8 A	T _J = 125 °C	0.331	-				
		I _F = 15 A		0.413	0.48				
		I _F = 30 A		0.572	-				
Reverse current per diode	Poverse current per diede	I _R ⁽²⁾	I _R ⁽²⁾ V	1 (2)	V _R = 40 V	T _J = 25 °C	88	360	μΑ
	IR (−)			v _R = 40 v	T _J = 100 °C	12	45	mA	
Typical junction capacitance per diode	CJ	4.0 V, 1 MHz		750	-	pF			

Note

⁽²⁾ Pulse test: Pulse width ≤ 40 ms

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	M30L40C	UNIT		
Typical thermal resistance per diode	$R_{ heta JC}$	2.0	°C/W		

ORDERING INFORMATION (Example)						
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE		
M30L40C-E3/4W	2.068	4W	50/tube	Tube		

RATINGS AND CHARACTERISTICS CURVES ($T_A = 25$ °C unless otherwise noted)

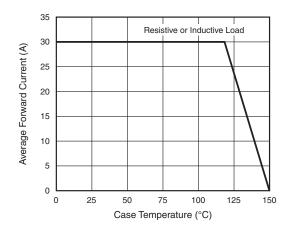


Fig. 1 - Forward Current Derating Curve

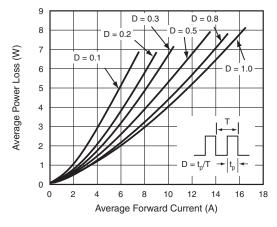


Fig. 2 - Forward Power Loss Characteristics Per Diode

⁽¹⁾ Pulse test: 300 µs pulse width, 1 % duty cycle



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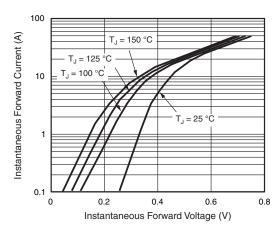


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

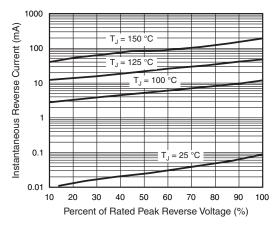


Fig. 4 - Typical Reverse Characteristics Per Diode

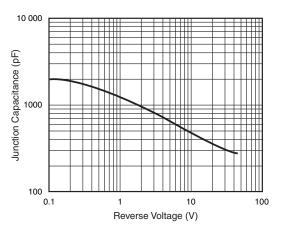


Fig. 5 - Typical Junction Capacitance Per Diode

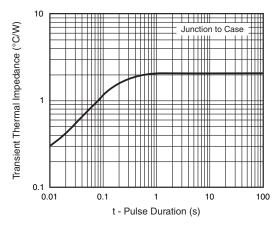
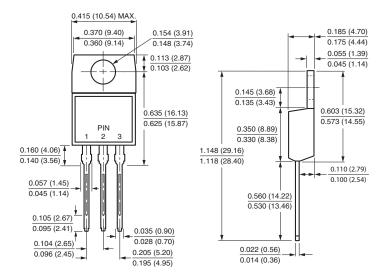


Fig. 6 - Typical Transient Thermal Impedance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

TO-220AB





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Revision: 02-Oct-12 Document Number: 91000