New Product



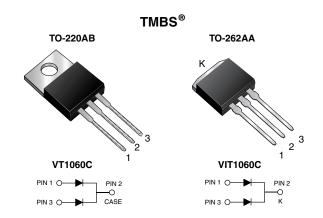
Revision: 23-Mar-11

VT1060C, VIT1060C

Vishay General Semiconductor

Dual High-Voltage Trench MOS Barrier Schottky Rectifier

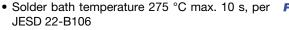
Ultra Low $V_F = 0.39$ V at $I_F = 2.5$ A



PRIMARY CHARACTERISTICS					
I _{F(AV)}	2 x 5.0 A				
V _{RRM}	60 V				
I _{FSM}	100 A				
V _F at I _F = 5.0 A	0.50 V				
T _J max.	150 °C				

FEATURES

- Trench MOS Schottky technology
- Low forward voltage drop, low power losses
- High efficiency operation



- AEC-Q101 qualified
- · Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

TYPICAL APPLICATIONS

For use in high frequency DC/DC converters, switching power supplies, freewheeling diodes, OR-ing diode, and reverse battery protection.

MECHANICAL DATA

Case: TO-220AB and TO-262AA Molding compound meets UL 94 V-0 flammability rating Base P/N-M3 - halogen-free, RoHS compliant, and

commercial grade Base P/NHM3 - halogen-free, RoHS compliant, and AEC-Q101 qualified

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

M3 suffix meets JESD 201 class 1A whisker test, HM3 suffix meets JESD 201 class 2 whisker test

Polarity: As marked

Mounting Torque: 10 in-lbs maximum

MAXIMUM RATINGS ($T_A = 25 \text{ °C}$ unless otherwise noted)						
PARAMETER		SYMBOL	VT1060C	VIT1060C	UNIT	
Maximum repetitive peak reverse voltage		V _{RRM}	60		V	
Maximum average forward rectified current (fig. 1)	per device	I _{F(AV)}	10		A	
	per diode		5			
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load		I _{FSM}	100		А	
Voltage rate of change (rated V _R)		dV/dt	10 000		V/µs	
Operating junction and storage temperature range		T _J , T _{STG}	- 55 to + 150		°C	

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BoHS COMPLIANT HALOGEN FREE

VT1060C, VIT1060C

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ELECTRICAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted)							
PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT	
Instantaneous forward voltage per diode	I _F = 2.5 A	- T _A = 25 °C	V _F (1)	0.49	-	V	
	I _F = 5.0 A			0.58	0.70		
	I _F = 2.5 A	T _A = 125 °C		0.39	-		
	I _F = 5.0 A			0.50	0.60		
Reverse current per diode	$\mathcal{M} = 60 \mathcal{M}$	T _A = 25 °C	I _R (2)	-	700	μA	
	V _R = 60 V	T _A = 125 °C		6.6	25	mA	

Notes

 $^{(1)}\,$ Pulse test: 300 μs pulse width, 1 $\,\%$ duty cycle

⁽²⁾ Pulse test: Pulse width \leq 40 ms

THERMAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted)					
PARAMETER		SYMBOL	VT1060C VIT1060C		UNIT
Typical thermal resistance	per diode	- R _{θJC}	3.5		°C/W
	per device		2.5		

ORDERING INFORMATION (Example)						
PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE	
TO-220AB	VT1060C-M3/4W	1.87	4W	50/tube	Tube	
TO-262AA	VIT1060C-M3/4W	1.45	4W	50/tube	Tube	
TO-220AB	VT1060CHM3/4W (1)	1.87	4W	50/tube	Tube	
TO-262AA	VIT1060CHM3/4W ⁽¹⁾	1.45	4W	50/tube	Tube	

Note

⁽¹⁾ AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

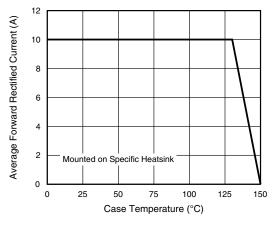


Fig. 1 - Maximum Forward Current Derating Curve

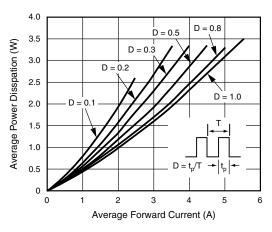


Fig. 2 - Forward Power Dissipation Characteristics

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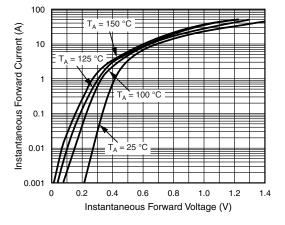


Fig. 3 - Typical Instantaneous Forward Characteristics

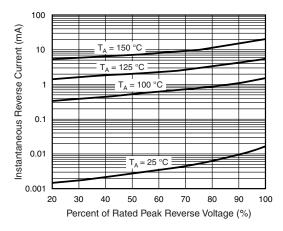


Fig. 4 - Typical Reverse Characteristics

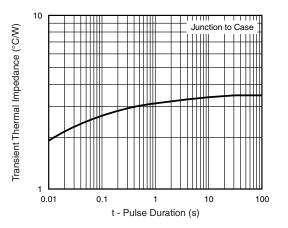


Fig. 5 - Typical Transient Thermal Impedance

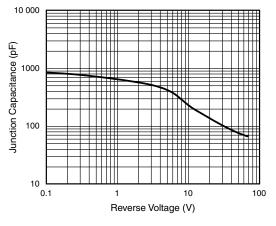


Fig. 6 - Typical Junction Capacitance

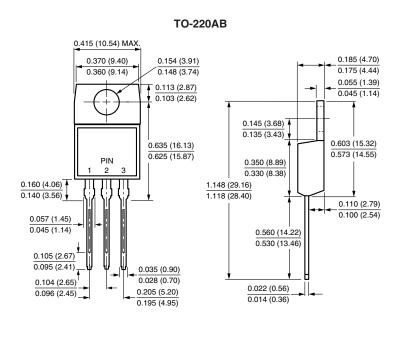
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VT1060C, VIT1060C

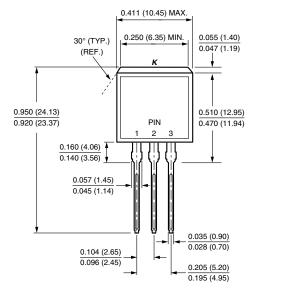
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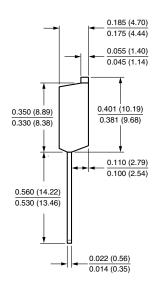


PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



TO-262AA





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