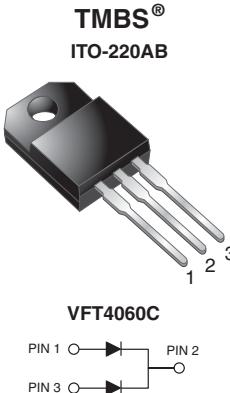


Dual Trench MOS Barrier Schottky Rectifier

Ultra Low V_F = 0.32 V at I_F = 5.0 A



FEATURES

- Trench MOS Schottky technology
- Low forward voltage drop, low power losses
- High efficiency operation
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of **RoHS COMPLIANT** compliance please see www.vishay.com/doc?99912



TYPICAL APPLICATIONS

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

MECHANICAL DATA

Case: ITO-220AB

Molding compound meets UL 94 V-0 flammability rating
Base P/N-E3 - RoHS-compliant, and 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 20 A
V_{RRM}	60 V
I_{FSM}	240 A
V_F at I_F = 20 A	0.48 V
T_J max.	150 °C
Package	ITO-220AB
Circuit configuration	Common cathode

MAXIMUM RATINGS (T_A = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	VFT4060C		UNIT	
Maximum repetitive peak reverse voltage	V_{RRM}	60		V	
Maximum average forward rectified current (fig. 1)	$I_{F(AV)}$	40		A	
		20			
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	240		A	
Voltage rate of change (rated V_R)	dV/dt	10 000		V/μs	
Isolation voltage from terminal to heatsink $t = 1$ min	V_{AC}	1500		V	
Operating junction and storage temperature range	T_J , T_{STG}	-40 to +150		°C	

ELECTRICAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)					
PARAMETER	TEST CONDITIONS	SYMBOL	TYP.	MAX.	UNIT
Instantaneous forward voltage per diode	I_F = 5.0 A	T_A = 25 °C	0.43	-	V
			0.48	-	
			0.53	0.62	
	I_F = 10 A	T_A = 125 °C	0.32	-	
			0.39	-	
			0.48	0.57	
Reverse current per diode	V_R = 60 V	T_A = 25 °C	-	6.0	mA
		T_A = 125 °C	34	190	

Notes

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

(2) Pulse test: Pulse width ≤ 40 ms

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

PARAMETER	SYMBOL	VFT4060C		UNIT
Typical thermal resistance	per diode	$R_{\theta\text{JC}}$	5.0	$^\circ\text{C}/\text{W}$
	per device		3.0	

ORDERING INFORMATION (Example)

PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
ITO-220AB	VFT4060C-E3/4W	1.75	4W	50/tube	Tube

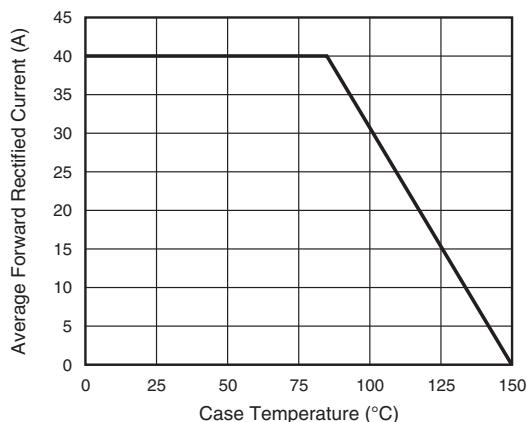
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25^\circ\text{C}$ unless otherwise noted)


Fig. 1 - Maximum Forward Current Derating Curve

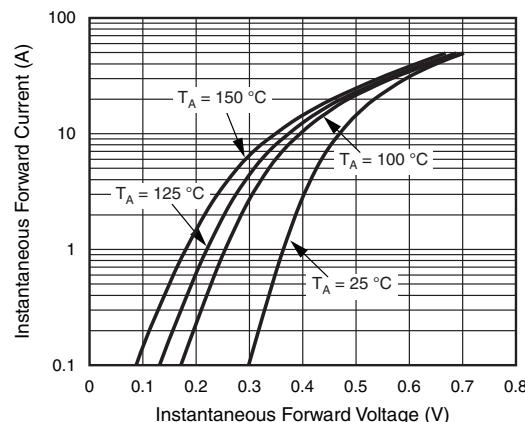


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

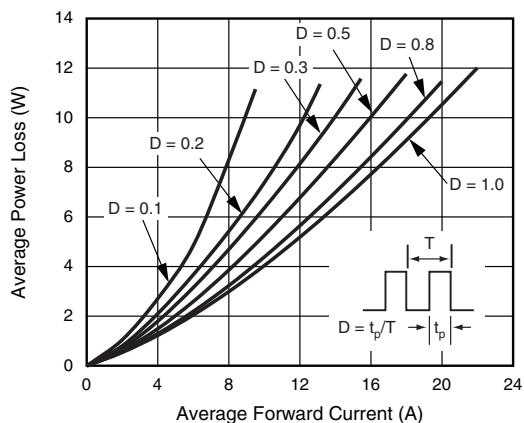


Fig. 2 - Forward Power Dissipation Characteristics Per Diode

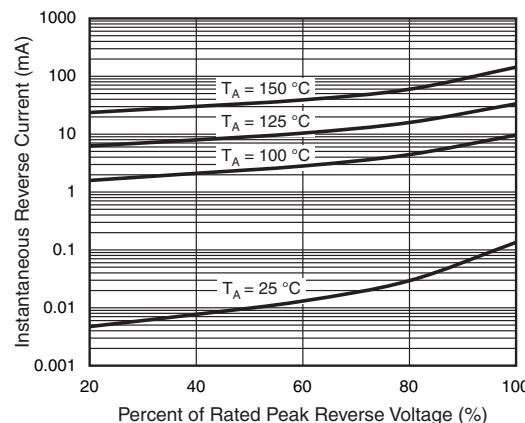


Fig. 4 - Typical Reverse Characteristics Per Diode

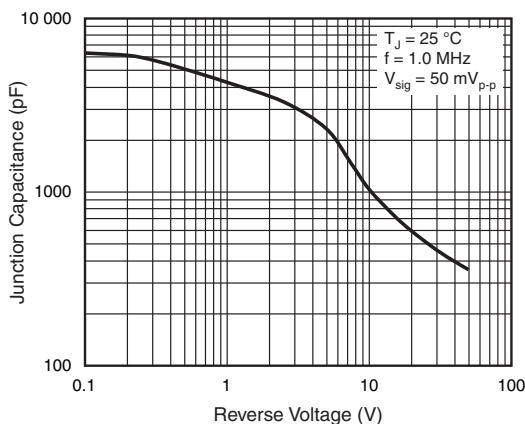


Fig. 5 - Typical Transient Thermal Impedance Per Diode

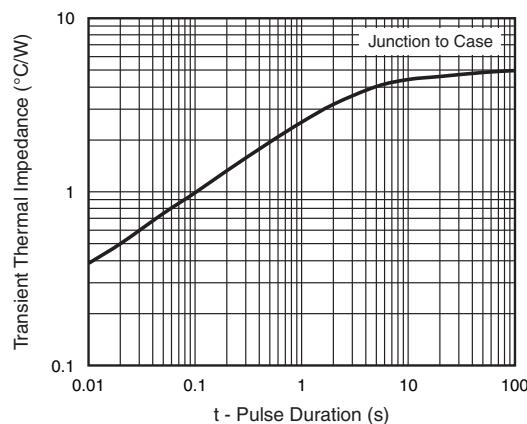
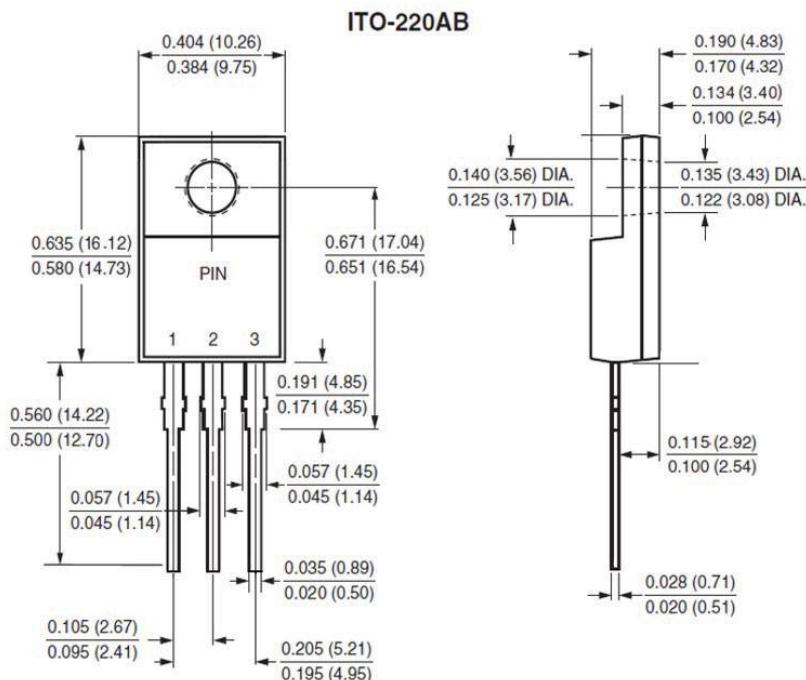


Fig. 6 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



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