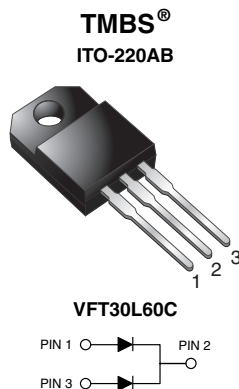




Dual Trench MOS Barrier Schottky Rectifier

Ultra Low $V_F = 0.32\text{ V}$ at $I_F = 5.0\text{ A}$



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
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC



RoHS
COMPLIANT

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 15 A
V_{RRM}	60 V
I_{FSM}	200 A
V_F at $I_F = 15\text{ A}$	0.45 V
T_J max.	150 °C

MAXIMUM RATINGS ($T_A = 25\text{ °C}$ unless otherwise noted)

PARAMETER	SYMBOL	VFT30L60C	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	60	V
Maximum average forward rectified current (fig. 1)	$I_{F(AV)}$	30	A
		15	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	200	A
Voltage rate of change (rated V_R)	dV/dt	10 000	V/ μ s
Isolation voltage from terminal to heatsink $t = 1\text{ min}$	V_{AC}	1500	V
Operating junction and storage temperature range	T_J, T_{STG}	- 40 to + 150	°C

VFT30L60C

Vishay General Semiconductor

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

PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT
Instantaneous forward voltage per diode	I _F = 5.0 A	T _A = 25 °C	V _F ⁽¹⁾	0.43	-	V
	I _F = 7.5 A			0.46	-	
	I _F = 15 A			0.51	0.60	
	I _F = 5.0 A	T _A = 125 °C		0.32	-	
	I _F = 7.5 A			0.36	-	
	I _F = 15 A			0.45	0.57	
	Reverse current per diode	V _R = 60 V		T _A = 25 °C	I _R ⁽²⁾	
T _A = 125 °C			27	110		

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	VFT30L60C	UNIT
Typical thermal resistance	per diode	$R_{\theta JC}$	5.0	$^{\circ}\text{C/W}$
	per device		3.5	

ORDERING INFORMATION (Example)

PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
ITO-220AB	VFT30L60C-E3/4W	1.75	4W	50/tube	Tube

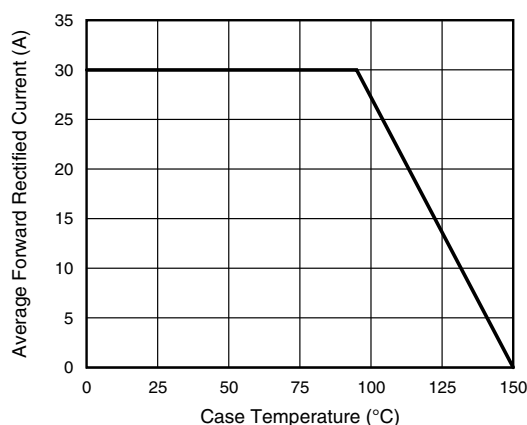
RATINGS AND CHARACTERISTICS CURVES($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Fig. 1 - Maximum Forward Current Derating Curve

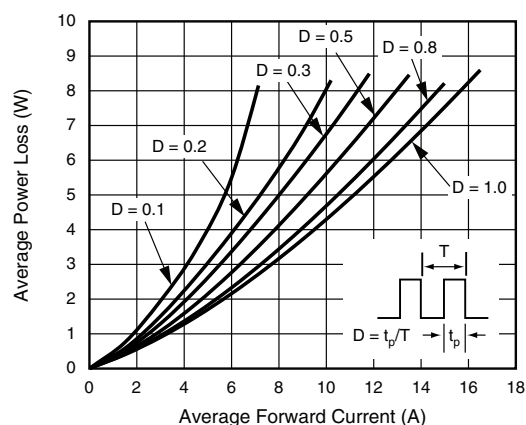


Fig. 2 - Forward Power Dissipation Characteristics Per Diode

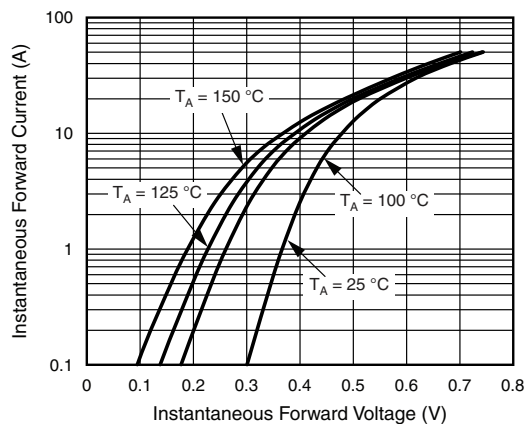


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

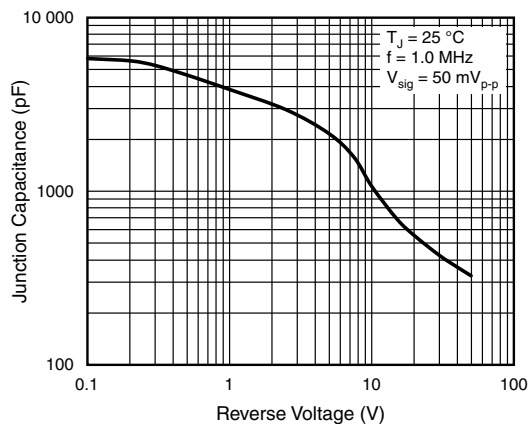


Fig. 5 - Typical Transient Thermal Impedance Per Diode

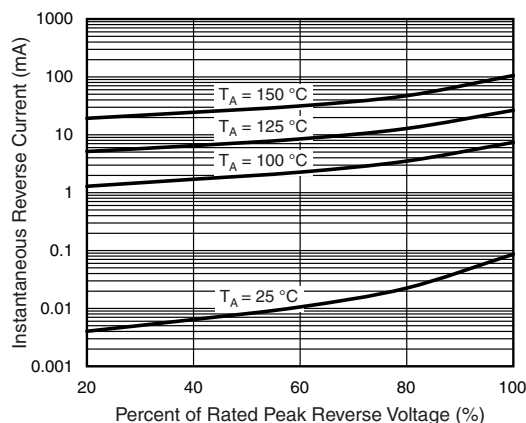


Fig. 4 - Typical Reverse Characteristics Per Diode

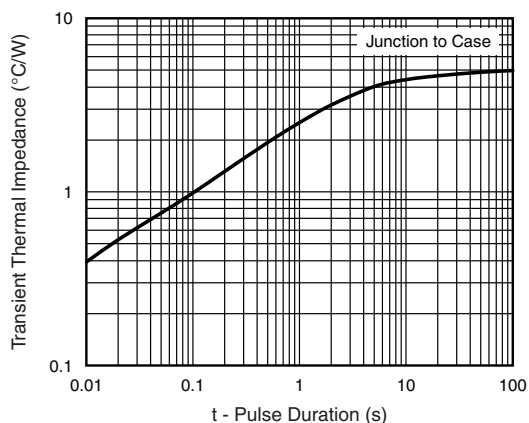
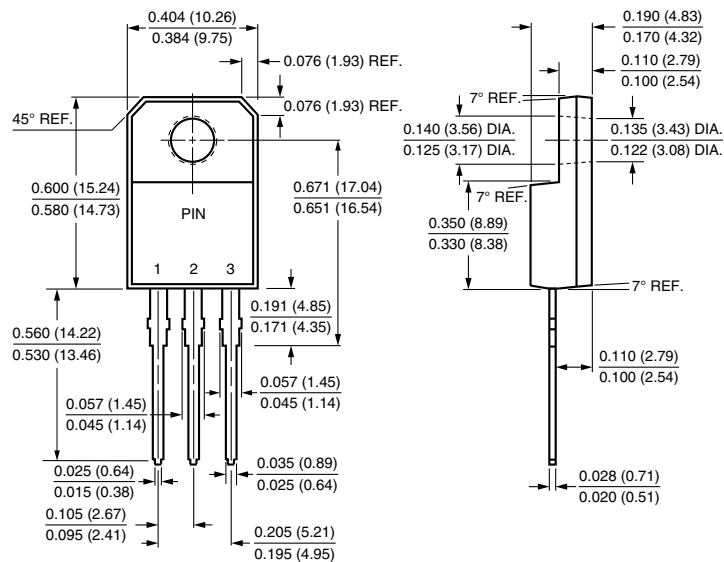


Fig. 6 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

ITO-220AB





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