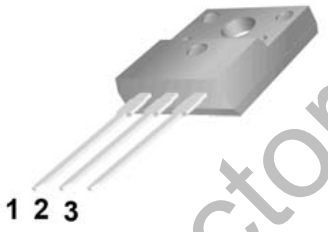
20A LOW VF SCHOTTKY BARRIER RECTIFIER

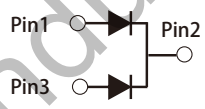
WG
wildGoose

MBRF20300VCT

RoHS
COMPLIANT

TO-220F
(ITO-220AB)





1.Anode 2.Cathode 3. Anode

Features:

- ☐ Low power loss, high efficiency.
- ☐ High surge capacity.
- ☐ High frequency operation.
- ☐ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- ☐ Metal silicon junction, majority carrier conduction.
- ☐ High current Capability, low forward voltage drop.
- ☐ Guard ring for over voltage protection.

Absolute Maximum Ratings (Ta=25℃ unless otherwise noted)

Parameter		Symbol	Value	Unit
Maximum repetitive peak reverse voltage		V_{RRM}	300	V
Maximum average forward rectified current	Per leg	$IF_{(AV)}$	10	A
	Total device		20	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)		I_{FSM}	180	A
Operating junction and Storage temperature range		T_J ,T_{stg}	-55 to+175	℃

Electrical Characteristcs (Ta=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage (Per leg)	IF=3.0A		VF [1)]	0.76	-	V
	IF=10.0A			0.86	0.92	
	IF=15.0A			0.92	-	
Reverse Current	VR=300V	T_A=25℃	IR [2)]	0.1	5	μA
		T_A=125℃		3	-	mA

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle
2.Pulse test: pulse width≤40ms

Thermal Characteristcs

Parameter	Symbol	Value	Unit
Typical thermal resistance[3)]	$R_{\theta JC}$	4.5	℃/W

3.Thermal resistance from junction to case

RATING AND CHARACTERISTIC CURVES

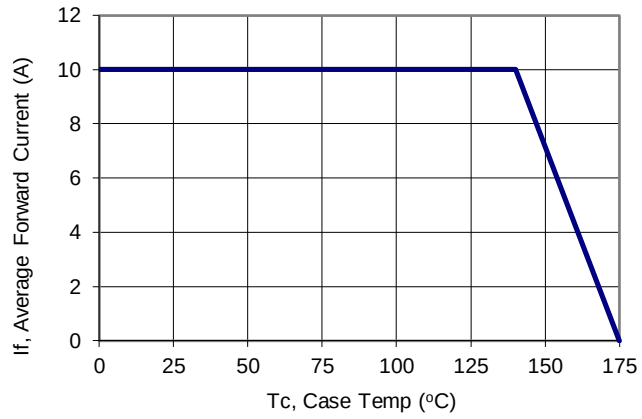


Figure 1: Current Derating, Case

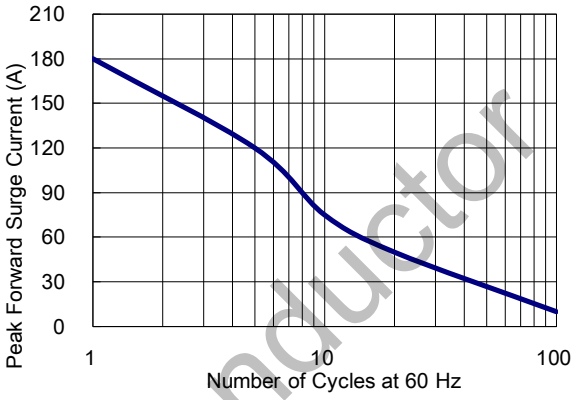


Figure 2: Maximum Repetitive Surge Current

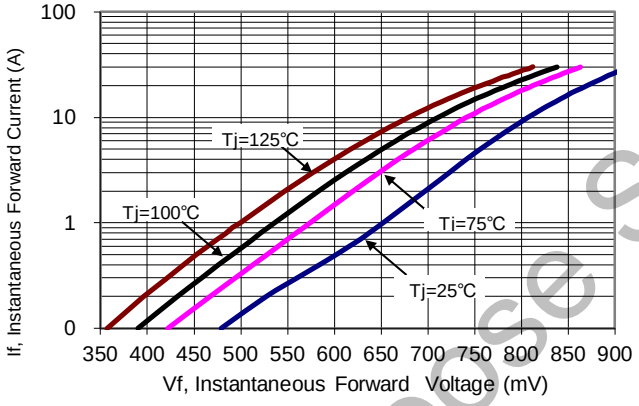


Figure 3: Typical Forward Voltage

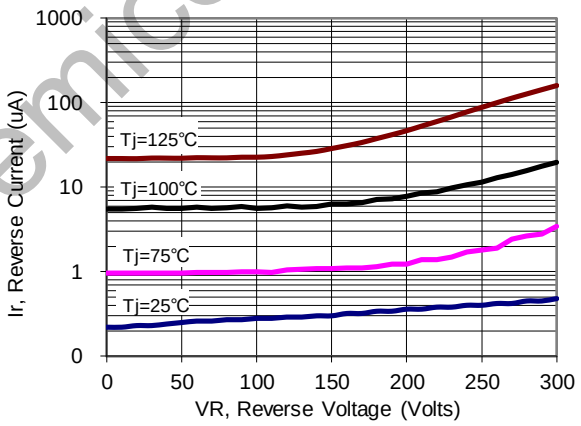


Figure 4: Typical Reverse Current

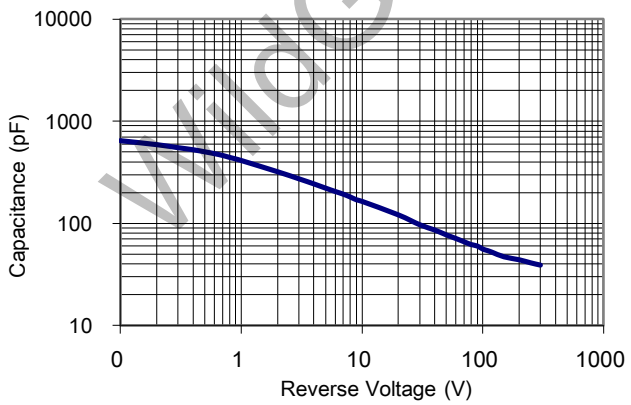


Figure 5: Typical Junction Capacitance

Package Dimension

TO-220F
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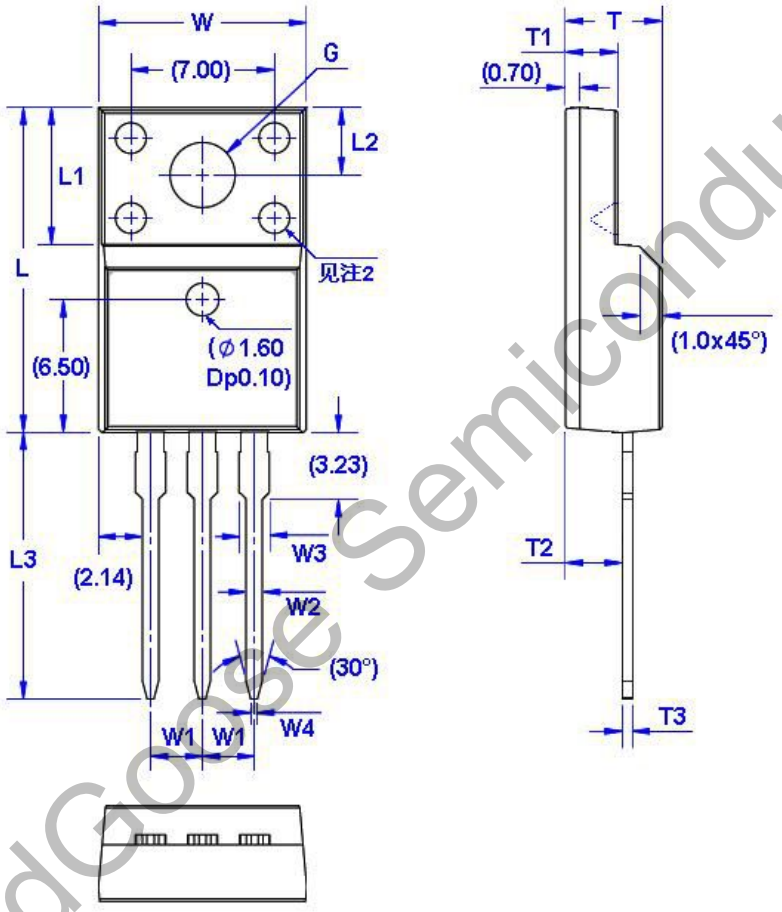

Symbol	Size		Symbol	Size		Symbol	Size		Symbol	Size	
	Min	Max		Min	Max		Min	Max		Min	Max
W	9.96	10.36	W4	0.25	0.45	L3	12.78	13.18	T3	0.45	0.60
W1	2.54 (TYP)		L	15.67	16.07	T	4.50	4.90	G(Φ)	3.08	3.28
W2	0.70	0.90	L1	6.48	6.88	T1	2.34	2.74			
W3	1.24	1.47	L2	3.20	3.40	T2	2.56	2.96			