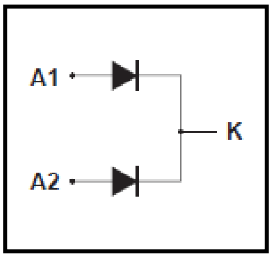
WINSEMI
SEMICONDUCTOR™

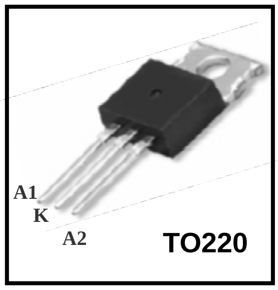
WSP20D100

Power Schottky Rectifier



Features

- 20A(2×10A),100V
- V_F(max)=0.68V(@TJ=125℃)
- Low power loss, high efficiency
- Common cathode structure
- Guard ring for over voltage protection, High reliability
- Maximum Junction Temperature Range(175℃)



General Description

Dual center tap Schottky rectifiers suited for High frequency switch power supply and Free wheeling diodes, polarity protection applications.

Absolute Maximum Ratings

Symbol	Parameter		Value	Units
V_{DRM}	Repetitive peak reverse voltage		100	V
V_{DC}	Maximum DC blocking voltage		100	V
$I_{F(RMS)}$	RMS forward current		30	A
$I_{F(AV)}$	Average forward current	per diode	10	A
		per device	20	
I_{FSM}	Surge non repetitive forward current		150	A
I_{RRM}	Repetitive peak reverse current		1	A
dv/dt	Critical rate of rise of reverse voltage		10000	V/ns
$T_{J,}$	Junction Temperature		175	℃
T_{stg}	Storage Temperature		-40~150	℃

Thermal Characteristics

Symbol	Parameter	Value			Units
		Min	Typ	Max	
R_{QJC}	Thermal Resistance, Junction-to-Case	-	-	1.9	℃/W
R_{QCS}	Thermal Resistance, Case-to-Sink	0.1	-	-	℃/W

Electrical Characteristics (per diode)

Characteristics	Symbol	Test Condition		Min	Typ.	Max	Unit
Reverse leakage current	I_R	VR = VRRM	Tj = 25°C	-	-	10	μA
			Tj = 125°C		-	5	mA
Forward voltage drop	V_F	IF= 10A	Tj = 25°C	-	0.75	0.80	V
			Tj = 125°C	-	0.62	0.68	
		IF= 20A	Tj = 25°C	-	-	0.74	
			Tj = 125°C	-	0.62	0.7	

Note :tp = 380 μs, $\delta < 2\%$

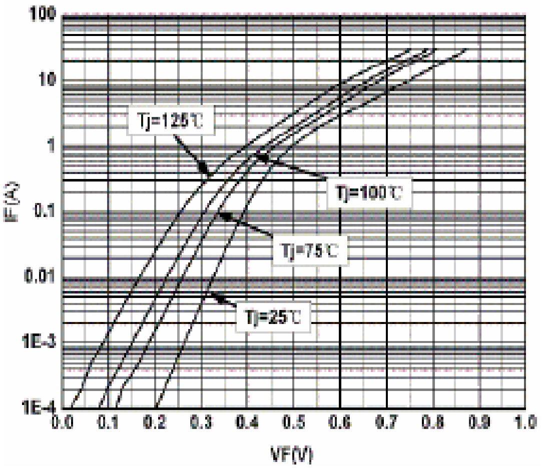


Fig.1 Forward voltage drop versus forward current (maximum values, per diode).

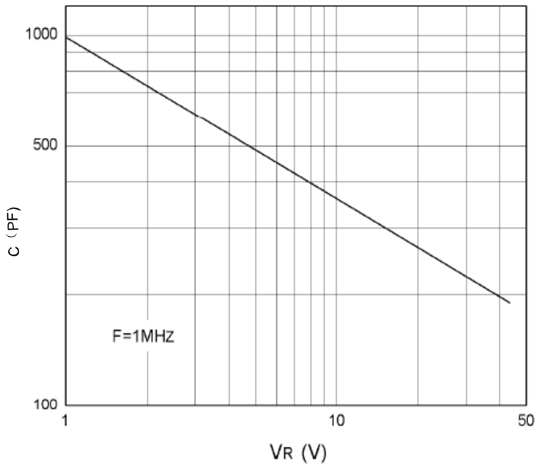


Fig.2 Junction capacitance versus reverse voltage applied (typical values, per diode).

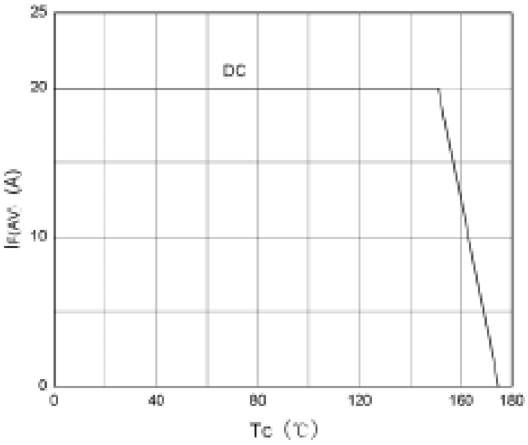


Fig.3 Average current versus ambient temperature (d=0.5) (per diode)

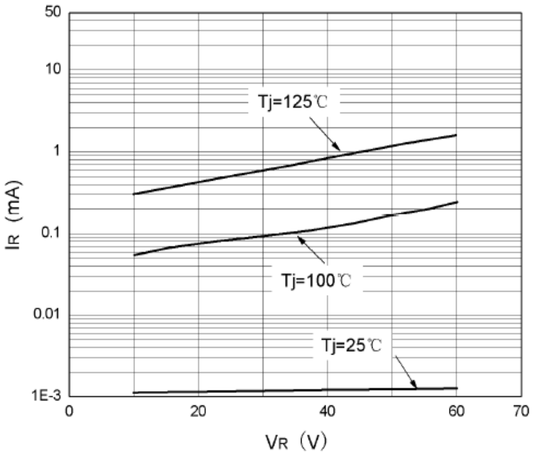


Fig.4 Reverse leakage current versus reverse voltage applied (typical values, per diode)..

TO-220 Package Dimension

Unit: mm