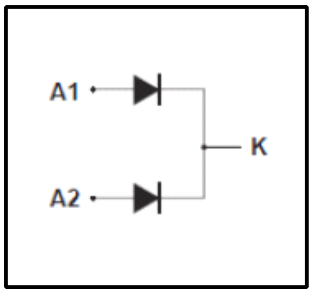
WSP20D150

Silicon Controlled Rectifiers

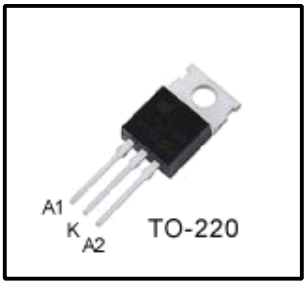
Features

- 20A(2×10A),150V
- $V_{F(max)}$=0.75V(@T_J=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		150	V
V_{DC}	Maximum DC blocking Voltage		150	V
$I_{F(RMS)}$	RMS forward Current		20	A
$I_{F(AV)}$	Average forward current	Per diode	10	A
		Per device	20	
I_{FSM}	Surge non repetitive for ward current		200	A
I_{RRM}	Repetitive peak reverse current		1	A
dv/dt	Critical rate of rise pf reverse voltage		10000	V/ns
T_J	Junction Temperature		175	°C
T_{STG}	Storage Temperature		-40~150	°C

Thermal Characteristics

Symbol	Parameter	Value			Units
		Min	Typ	Max	
$R_{\theta JC}$	Thermal Resistance Junction to Case	-	-	2.2	℃/W

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Electrical Characteristics **(per diode)**

Characteristics	Symbol	Test Conditions		Min	Typ	Max	Units
Reverse leakage current	I_R	$V_R=V_{RRM}$	Tj=25℃	-	-	10	μA
			Tj=125℃	-	-	5	mA
Forward voltage drop	V_F	IF=10A	Tj=25℃	-	0.83	0.92	V
			Tj=125℃	-	0.68	0.75	

*Notes:tp =380μs, δ<2%

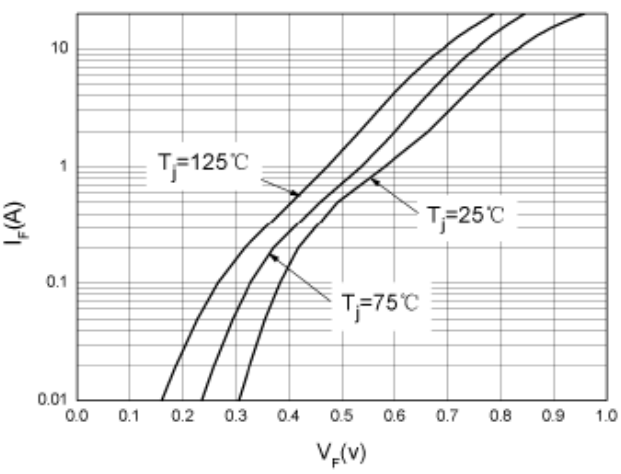

Fig.1Forward Voltage Drop Versus Forward current(maximum Values ,per diode)

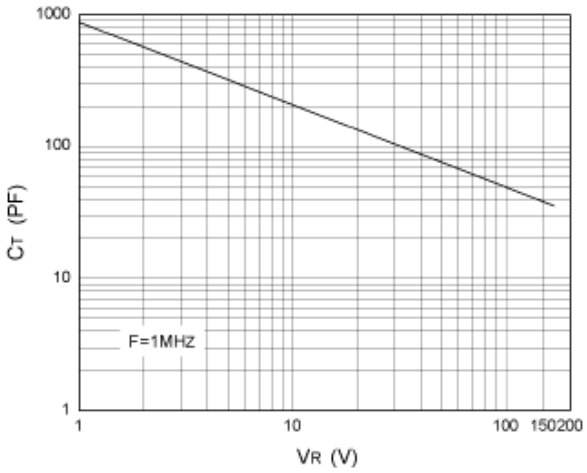

Fig .2 Junction Capacitance Versus reverse Voltage applied (typical Values,per diode)

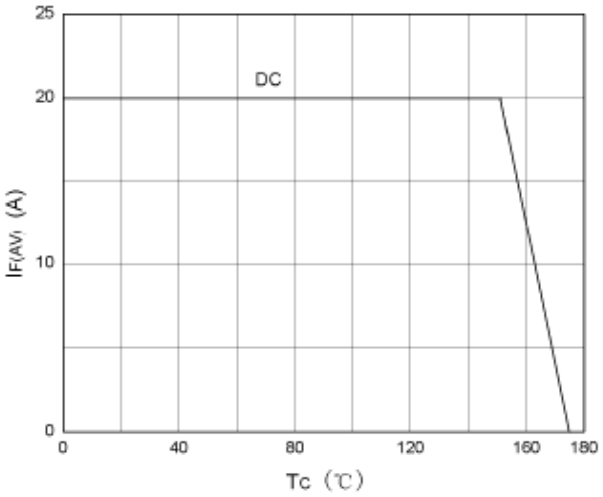

Fig. 3 Average Current versus ambient temperature (d=0.5)(per diode)

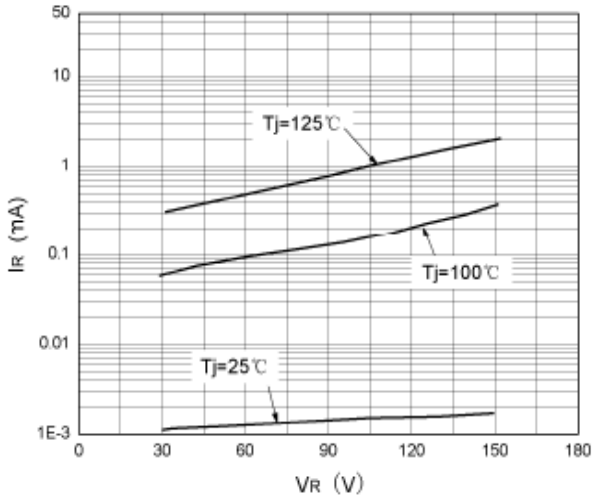

Fig. 4 Reverse leakage current versus reverse voltage applied (typical values,per diode)

TO-220 Package Dimension

Unit: mm