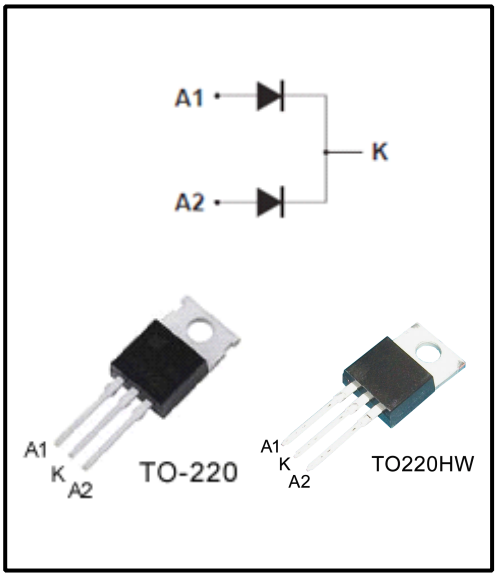
Silicon Controlled Rectifiers

Features

- 30A(2×15A),100V
- $V_{F(max)}$=0.72V(@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		100	V
V_{DC}	Maximum DC blocking Voltage		100	V
$I_{F(AV)}$	Average forward current	Per diode	15	A
		Per device	30	
I_{FSM}	Surge non repetitive for ward current		275	A
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	-	-	1.8	℃/W

Ordering Information

Order codes	Package	Marking	Halogen Free	Packaging
WSP30D100	TO220C	P30D100	NO	Tube
WSP30D100-HW	TO220HW	P30D100	NO	Tube

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=15A	Tj=25℃	-	0.78	0.85	V
			Tj=125℃	-	0.66	0.72	

*Notes:tp =380μs, δ<2%

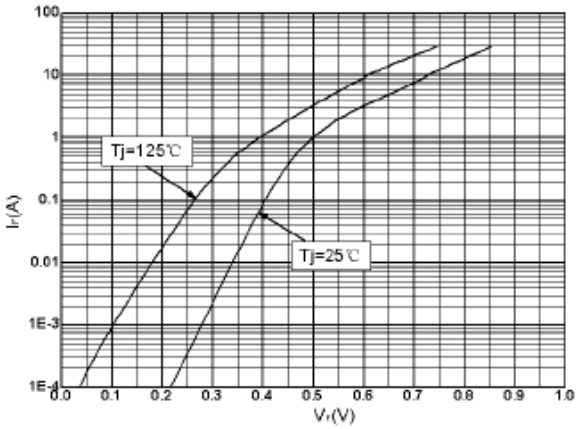


Fig.1Forward Voltage Drop Versus Forward current(maximum Values ,per diode)

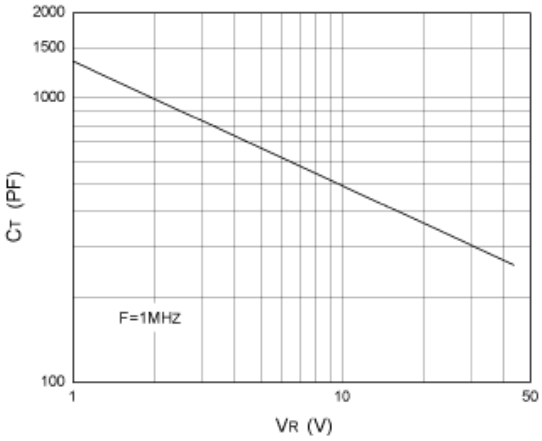


Fig .2 Junction Capacitance Versus reverse Voltage applied (typical Values,per diode)

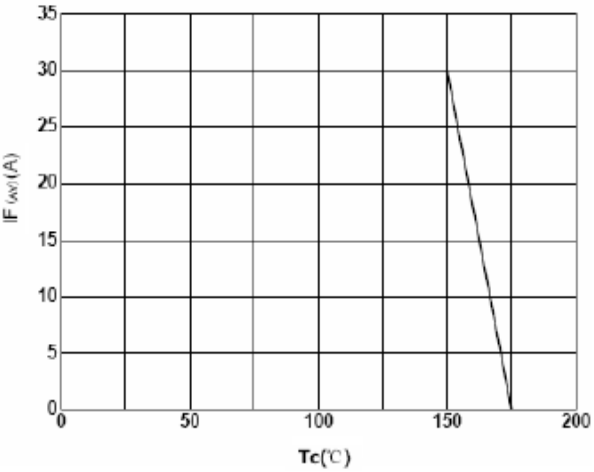


Fig. 3 Average Current versus ambient temperature (d=0.5)(per diode)

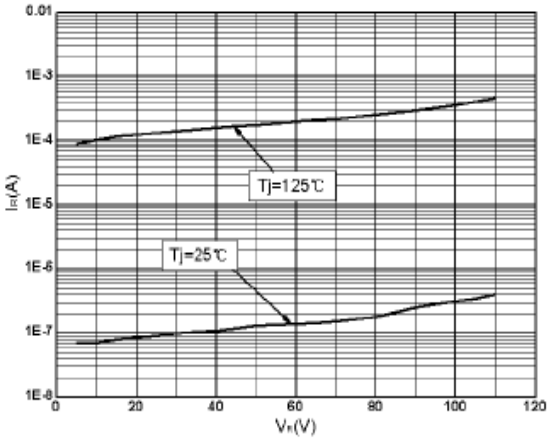
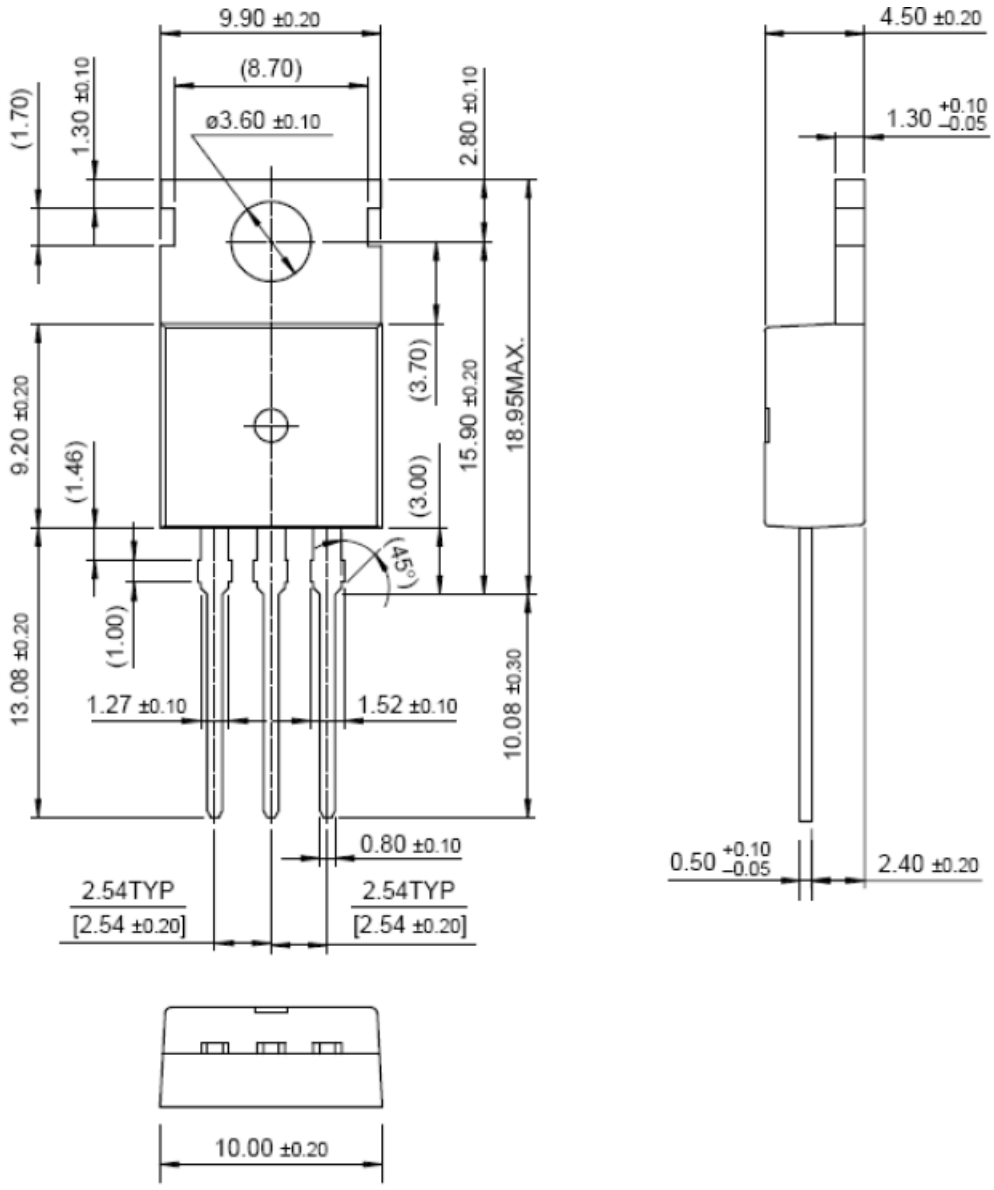


Fig. 4 Reverse leakage current versus reverse voltage applied (typical values,per diode)

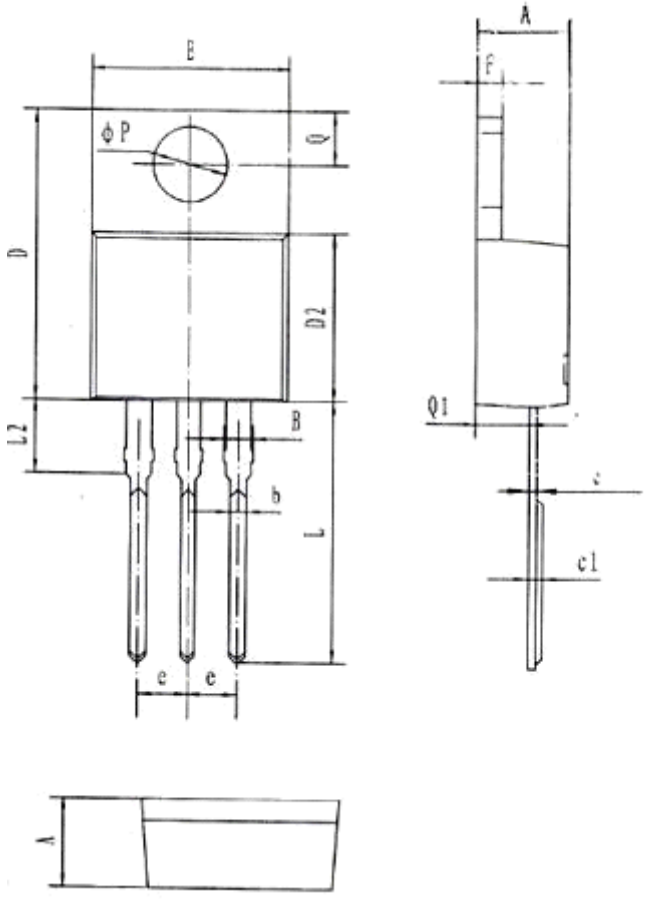
TO-220 Package Dimension

Unit: mm



TO-220HW Package Dimension

Unit:mm



符号 symbol	MIN	MAX
A	4.40	4.80
B	1.10	1.40
b	0.70	0.95
c	0.28	0.48
c1	0.32	0.52
D	14.45	16.00
D2	8.20	9.20
E	9.60	10.40
e	2.39	2.69
F	1.20	1.35
L	13.05	14.05
L2	3.70	3.90
Q	2.40	3.00
Q1	2.20	2.90
P	3.50	4.00