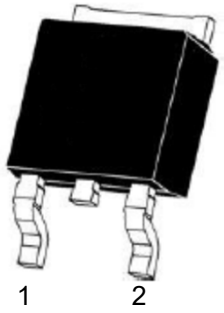
Prisemi®

PSICS2DP1200V10N

Schoktty Barrier Diode

Feature

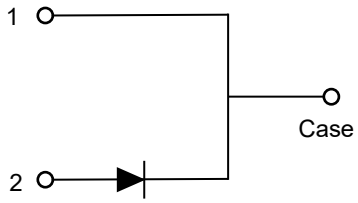
- Negligible reverse recovery
- Positive Temperature Coefficient on V_F
- Temperature-Independent Switching
- Fast switching
- Pb-free / RoHS compliant
- Low switching loss
- Higher frequency
- Low heat dissipation requirements
- Reduce size and cost of the system
- High-reliability



TO-252-2L

Applications

- Solar inverters
- Uninterruptable power supplies
- Motor drives
- Power Factor Correction



Circuit Diagram

Absolute maximum rating@25℃

Parameter		Symbol	Value	Units
Repetitive Peak Reverse Voltage		V_{RRM}	1200	V
Surge Peak Reverse Voltage		V_{RSM}	1200	V
DC Peak Reverse Voltage		V_R	1200	V
Continuous Forward Current	T_c=25℃	I_F	25	A
	T_c=135℃		13	
	T_c=148℃		10	
Non-repetitive Forward Surge Current	T_c=25℃,t_p=8.3ms,Half Sine Pulse	I_{FSM}	90	A
Power Dissipation	T_c=25℃	P_{tot}	125	W
Operating Junction and Storage Temperature		T_J,T_{STG}	-55~+175	℃

Electrical characteristics per line@25℃ (unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Forward Voltage	V_F	I_F = 10A, T_J=25℃	-	1.45	1.8	V
		I_F = 10A, T_J=175℃	-	2.0	-	
Reverse Current	I_R	V_R = 1200V, T_J=25℃	-	6	100	μA
		V_R = 1200V, T_J=175℃	-	30	500	
Total Capacitive Charge	Q_C	V_R = 800V, I_F = 10A di/dt =200A/μs , T_J=25℃	-	25	-	nC
Total Capacitance	C	V_R = 0.1V,f = 1MHz	-	600	-	pF
		V_R = 400V,f = 1MHz	-	45	-	
		V_R = 800V,f = 1MHz	-	34	-	

Thermal Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Units
Thermal Resistance（Junction to case）	$R_{\theta JC}$	-	1.2	-	℃/W
Thermal Resistance（Junction to ambient）	$R_{\theta JA}$	-	80	-	℃/W
Soldering Temperature	T_{sold}	-	260	-	℃

Typical Characteristics

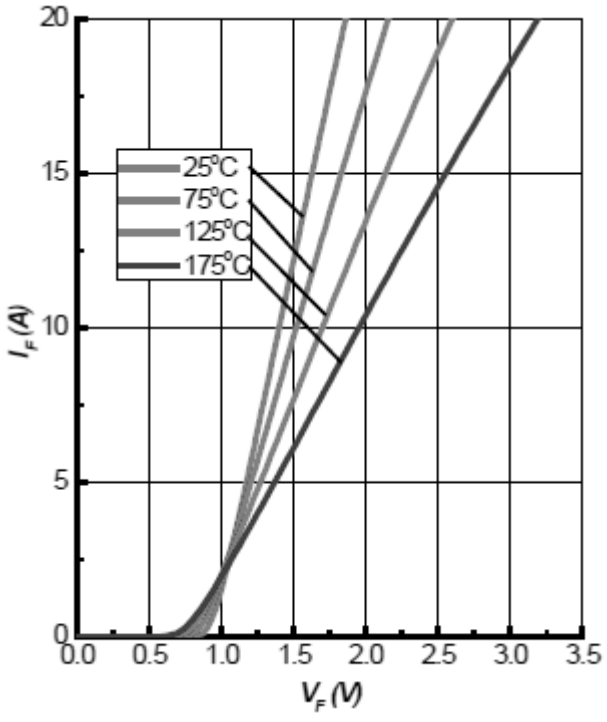


Fig.1 Forward Characteristics

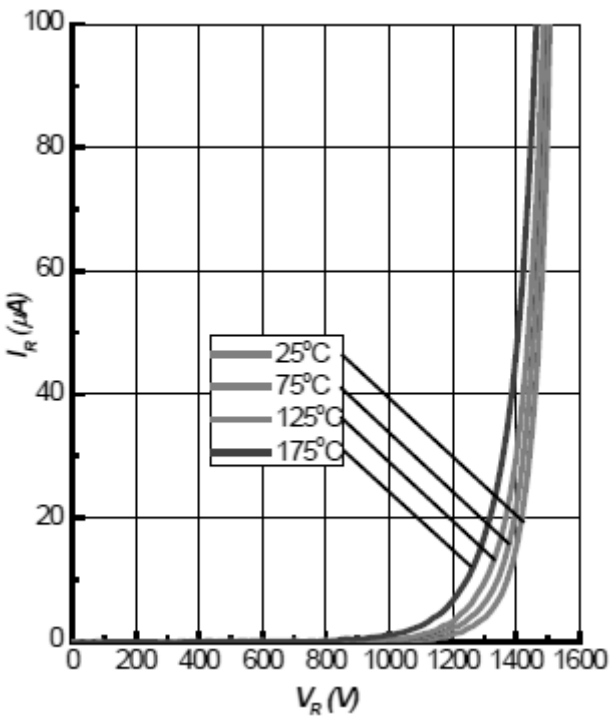


Fig.2 Reverse Characteristics

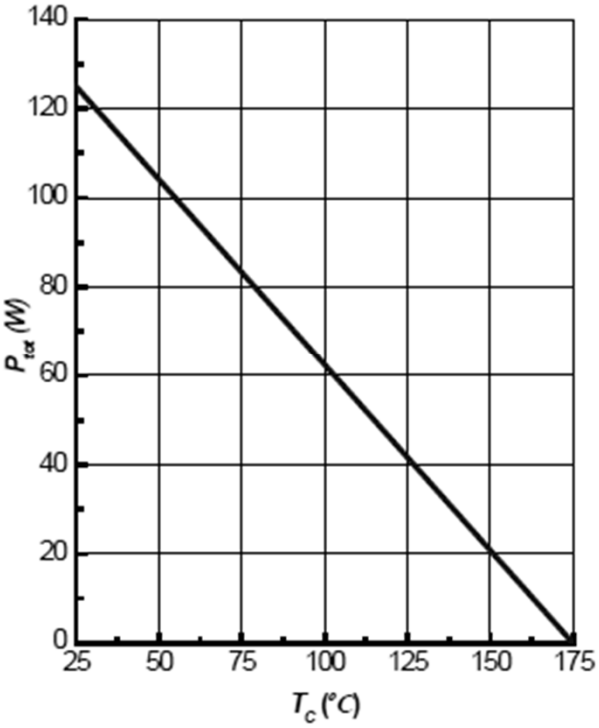


Fig.3 Power Derating

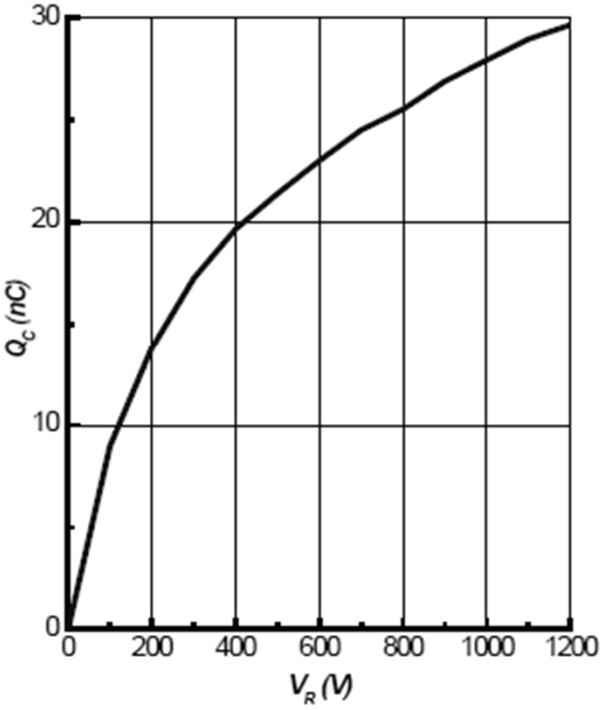


Fig.4 Total Capacitance vs. Reverse Voltage

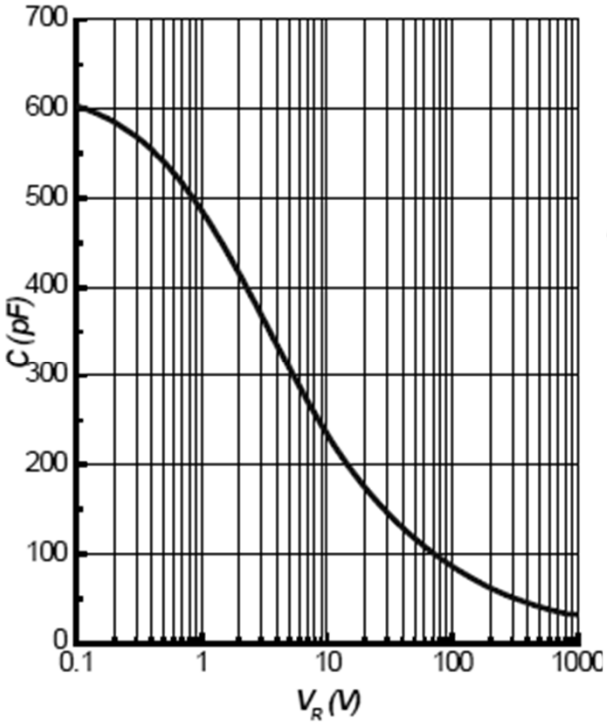


Fig.5 Total Capacitance Charge vs. Reverse Voltage

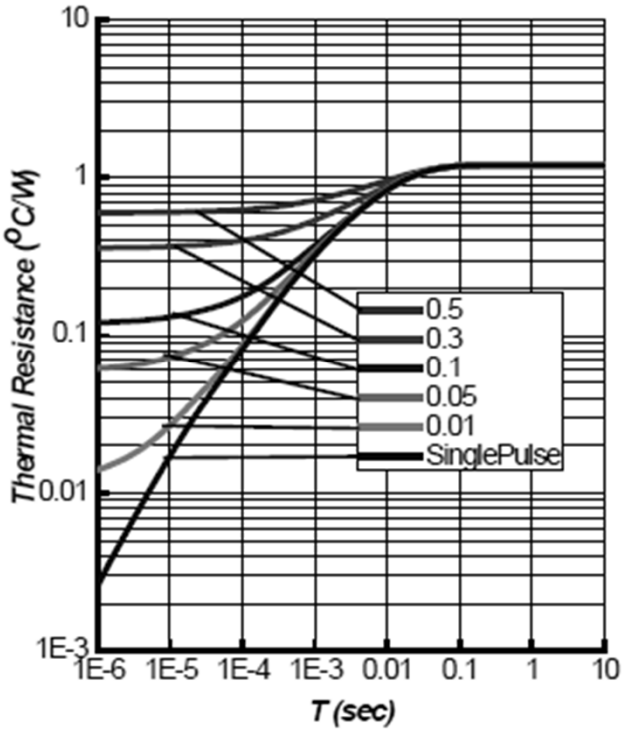
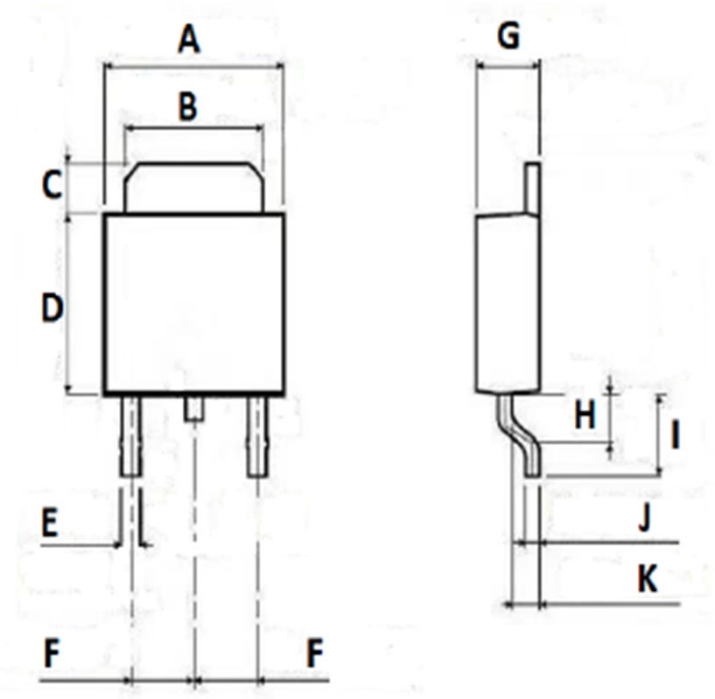


Fig.6 Transient Thermal Impedance

Product dimension (TO-252-2L)



Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	6.30	6.70	0.248	0.264
B	5.20	5.40	0.205	0.213
C	1.15	1.35	0.045	0.053
D	5.70	6.10	0.224	0.24
E	0.65	0.75	0.026	0.03
F	2.10	2.50	0.083	0.098
G	2.20	2.40	0.087	0.095
H	1.45	1.55	0.057	0.061
I	2.90	3.10	0.114	0.122
J	0.45	0.55	0.018	0.022
K	0.90	1.10	0.035	0.043

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