28A 1200V Silicon Carbide Schottky Diode SRD28V120D

General Description

The SRD28V120D is a Silicon Carbide Schottky Diode, which offers ultra low I_R and low V_F for high frequency applications such as PFC, Power Supply, Inverter, etc.

The SRD28V120D package is TO-247-2.

Features

- Zero Reverse Recovery Current
- Zero Forward Recovery Voltage
- Positive Temperature Coefficient on V_F
- Temperature-independent Switching
- 175℃ Operating Junction Temperature

Application

- Switch Mode Power Supplies
- Motor Driver, PV Inverter
- PFC Application
- High Frequency Operation
- Non-Automotive Qualified

Symbol

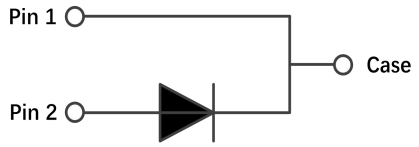
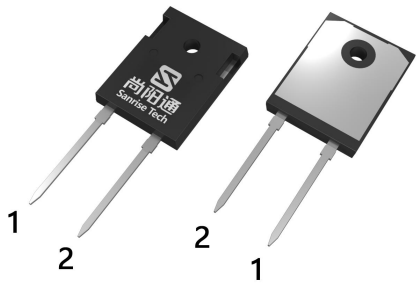


Figure 1 Symbol of SRD28V120D

Package Type



TO-247-2

Figure 2 Package Type of SRD28V120D

Ordering Information

SRD28V120D□□–□

Circuit Type

Package
T2: TO-247-2

E: Lead Free
G: Green

Blank: Tube
TR: Tape & Reel

Package	Part Number	Marking ID	Packing Type
TO-247-2	SRD28V120DT2-G	SRD28V120DT2G	Tube

28A 1200V Silicon Carbide Schottky Diode SRD28V120D

Absolute Maximum Ratings

Parameter	Test Conditions	Symbol	Value	Unit
Repetitive Peak Reverse Voltage		V_{RRM}	1200	V
Surge Peak Reverse Voltage		V_{RSM}	1200	V
Forward Current	$T_C \leq 150^oC$	I_F	28	A
Non-Repetitive Forward Surge Current	tp=10ms, Half Sine Wave	I_{FSM}	220	A
	T_C=110ºC		205	
Power Dissipation		P_{tot}	250	W
i^2t value	t_p=10ms	$\int i^2dt$	242	A^2S
	T_C=110ºC		210	
Operating Junction Temperature	-	T_J	-55 ~ 175	ºC
Storage Temperature	-	T_{STG}	-55 ~ 175	ºC
Soldering Temperature	-	T_{sold}	260	ºC
Single Pulse Avalanche Energy	L=2mH, I_{AS}=15A $V_{R(peak)}$>1500V	EAS	225	mJ

Note:
T_C= 25℃ unless otherwise specified

Thermal Resistance

Parameter	Symbol	Min	Typ.	Max	Unit
Thermal Resistance，Junction-to-Case	R_{thJC}	-	0.45	0.6	ºC/W
Thermal Resistance，Junction-to-Ambient	R_{thJA}	-	-	62	

28A 1200V Silicon Carbide Schottky Diode SRD28V120D

Electrical Characteristics

Parameter	Symbol	Test Conditions	Min	Typ.	Max	Unit
DC Blocking Voltage	V_{DC}	I_R=250uA	1200	-	-	V
Forward Voltage	V_F	I_F=28A	-	1.40	1.7	V
		I_F=28A, T_J=175ºC	-	1.95		
Reverse Current	I_R	V_R=1200V	-	3	50	μA
		V_R=1200V, T_J=175ºC	-	7		
Total Capacitance	C	V_R=1V, f=100kHz	-	1380	-	pF
		V_R=400V, f=100kHz	-	120	-	
		V_R=800V, f=100kHz	-	85	-	
Total Capacitive Charge	Q_C	V_R=800V, I_F=28A dI_F/dt=300A/us	-	138	-	nC

Note:
T_J= 25℃ unless otherwise specified

28A 1200V Silicon Carbide Schottky Diode SRD28V120D

Shenzhen Sanrise Technology Co., LTD

http://www.sanrise-tech.com

IMPORTANT NOTICE

Shenzhen Sanrise Technology Co., LTD. reserves the right to make changes without further notice to any products or specifications herein. Shenzhen Sanrise Technology Co., LTD. does not assume any responsibility for use of any its products for any particular purpose, nor does Shenzhen Sanrise Technology Co., LTD. assume any liability arising out of the application or use of any its products or circuits. Shenzhen Sanrise Technology Co., LTD. does not convey any license under its patent rights or other rights nor the rights of others.

Main Site:

- Headquarter

Shenzhen Sanrise Technology Co., LTD.
A1206, Skyworth building, No. 008, gaoxinnan 1st Road, Gaoxin District, Yuehai street, Nanshan District, ShenZhen, P.R. China
Tel: +86-755-22953335
Fax: +86-755-22916878

- Shanghai Office

Shenzhen Sanrise Technology Co., LTD.
Rm.401, Building B, No. 666, Zhangheng Road, Zhangjiang Hi-Tech Park, Shanghai, P.R.China

Tel: +86-21-68825918