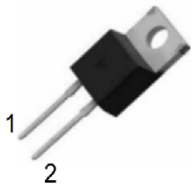
EDK120S10R1L

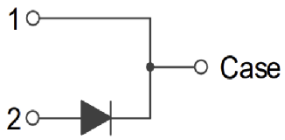
ev™ Silicon Carbide Schottky Diode
1200V, 10A

Features

- Zero Reverse Recovery Current
- Low Forward Voltage
- High Surge Current Capability
- Independent of Temperature Switching Behavior
- Positive Temperature Coefficient
- Max Junction Temperature 175 °C
- Pb-free, Halogen Free, and RoHS Compliant

V_{RRM}	$I_{F,\ Tc=25℃}$	$T_{J,\ Max}$	$Q_{C,\ Typ}$
1200V	10A	175°C	55nC





Benefits

- Higher Efficiency
- Ease of Paralleling
- Increased Power Density
- Reduced Cooling Requirements

Applications

- Solar Inverters
- Power Factor Correction
- Indusial Power Supply
- EV Charging Station

Ordering Information

Part Number	Package	Shipping	Quantity
EDK120S10R1L	TO-220-2L	Tube	30 units

■ Absolute Maximum Ratings (T_C=25℃, unless otherwise specified)

Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive Peak Reverse Voltage		1200	V
I_F	Forward Current	T_C=150℃	10	A
$I_{F,SM}$	Non-Repetitive Forward Surge Current	T_C=25℃, t_p=10ms	65	A
		T_C=150℃, t_p=10ms	55	
$I_{F,Max}$	Non-Repetitive Peak Forward Current	T_C=25℃, t_p=10µs	600	A
		T_C=150℃, t_p=10µs	510	
I^2dt value	$\int I^2t$	T_C=25℃, t_p=10ms	21	A^2s
		T_C=150℃, t_p=10ms	15	A^2s
P_{tot}	Power Dissipation	T_C=25℃	163	W
T_J , T_{STG}	Operating and Storage Temperature Range		-55 to 175	℃

■ Thermal Characteristics

Symbol	Parameter	Value	Unit
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case	0.92	℃/W

■ Electrical Characteristics (T_C=25℃, unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_F	Forward Voltage	I_F=10A, T_J=25℃		1.45	1.75	V
		I_F=10A, T_J=175℃		1.95		
I_R	Reverse Current	V_R=1200V, T_C=25℃			100	μA
		V_R=1200V, T_J=175℃			300	
Q_C	Total Capacitive Charge	V_R=800V, T_J=25℃		55		nC
C	Total Capacitance	V_R=1V, f=1MHz		580		pF
		V_R=800V, f=1MHz		35		
E_C	Capacitance Stored Energy	V_R=800V		15		μJ

Important Notice

Elevation reserves the right to modify, improve, and terminate its products, services, documentations, etc. without advance notice. Customers are encouraged to contact Elevation sales representatives to get the latest product information.

Without proper legal authorization, Elevation products shall not be used for medical or military applications. Elevation does not assume any liability of personal or property damages of any kind due to such applications.

All text, images, trademarks of this document, and any intellectual property contained in the product and in this document belong to Elevation. No part of this document may be used, copied, modified, distributed, or published without legal authorization from Elevation.

© 2022 Elevation Microsystems. All rights reserved. **www.elevationmicro.com**