

EDD120S10R1L

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

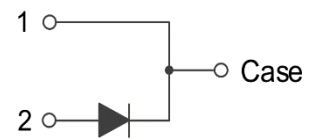
Benefits

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

Applications

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

V_{RRM}	$I_F, T_C=25^\circ C$	$T_{J, Max}$	Q_C, Typ
1200V	10A	175°C	55nC



Ordering Information

Part Number	Package	Shipping	Quantity
EDD120S10R1L	TO-263-2L	Tube	30 units

Absolute Maximum Ratings ($T_C=25^\circ C$, unless otherwise specified)

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

■ Thermal Characteristics

Symbol	Parameter	Value	Unit
R _{θJC}	Maximum Thermal Resistance, Junction to Case	0.92	°C/W

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

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V _F	Forward Voltage	I _F =10A, T _J =25°C		1.45	1.75	V
		I _F =10A, T _J =175°C		1.95		
I _R	Reverse Current	V _R =1200V, T _C =25°C			100	μA
		V _R =1200V, T _J =175°C			300	
Q _C	Total Capacitive Charge	V _R =800V, T _J =25°C		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

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