

# EDJ120S15R1L

## ev™ Silicon Carbide Schottky Diode 1200V, 15A

### 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

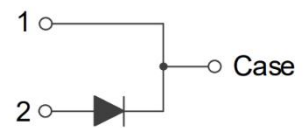
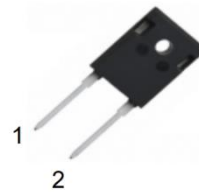
### Benefits

- 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	15A	175°C	90nC



### Ordering Information

Part Number	Package	Shipping	Quantity
EDJ120S15R1L	TO-247-2L	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	$T_C=155^\circ C$ 15	A
$I_{F,SM}$	Non-Repetitive Forward Surge Current	$T_C=25^\circ C, t_p=10ms$	110
		$T_C=150^\circ C, t_p=10ms$	95
$I_{F,Max}$	Non-Repetitive Peak Forward Current	$T_C=25^\circ C, t_p=10\mu s$	850
		$T_C=150^\circ C, t_p=10\mu s$	730
$I^2dt$ value	$\int I^2 dt$	$T_C=25^\circ C, t_p=10ms$	61
		$T_C=150^\circ C, t_p=10ms$	45
$P_{tot}$	Power Dissipation	$T_C=25^\circ C$ 231	W
$T_J, T_{STG}$	Operating and Storage Temperature Range	-55 to 175	°C

## ■ Thermal Characteristics

Symbol	Parameter	Value	Unit
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case	0.65	°C/W

## ■ Electrical Characteristics (T<sub>C</sub>=25°C, unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_F$	Forward Voltage	$I_F=15A, T_J=25^\circ C$		1.39	1.70	V
		$I_F=15A, T_J=175^\circ C$		1.80		
$I_R$	Reverse Current	$V_R=1200V, T_C=25^\circ C$			100	$\mu A$
		$V_R=1200V, T_J=175^\circ C$			300	
$Q_C$	Total Capacitive Charge	$V_R=800V, T_J=25^\circ C$		90		nC
C	Total Capacitance	$V_R=1V, f=1MHz$		1000		pF
		$V_R=800V, f=1MHz$		65		
$E_C$	Capacitance Stored Energy	$V_R=800V$		25		$\mu J$

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