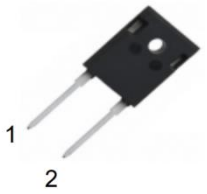
EDJ120S20R1L

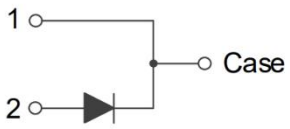
ev™ Silicon Carbide Schottky Diode
1200V, 20A

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	20A	175°C	120nC





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
EDJ120S20R1L	TO-247-2L	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℃	20	A
$I_{F,SM}$	Non-Repetitive Forward Surge Current	T_C=25℃, t_p=10ms	140	A
		T_C=150℃, t_p=10ms	120	
$I_{F,Max}$	Non-Repetitive Peak Forward Current	T_C=25℃, t_p=10µs	1200	A
		T_C=150℃, t_p=10µs	1000	
I^2dt value	$\int I^2t$	T_C=25℃, t_p=10ms	98	A^2s
		T_C=150℃, t_p=10ms	72	A^2s
P_{tot}	Power Dissipation	T_C=25℃	289	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	0.52	℃/W

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

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_F	Forward Voltage	I_F=20A, T_J=25℃		1.45	1.75	V
		I_F=20A, 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℃		120		nC
C	Total Capacitance	V_R=1V, f=1MHz		1360		pF
		V_R=800V, f=1MHz		85		
E_C	Capacitance Stored Energy	V_R=800V		35		μJ

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