Features

- Zero Reverse Recovery Current
- Zero Forward Recovery Voltage
- High-Frequency Operation
- Temperature-Independent Switching Behavior
- Positive Temperature Coefficient on V_F

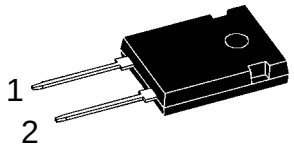
Benefits

- Replace Bipolar with Unipolar Rectifiers
- Higher System Efficiency
- Reduced Cooling Requirements
- Parallel Devices Without Thermal Runaway

Applications

- Switch Mode Power Supplies (SMPS)
- Server/Telecom Power Supplies
- Industrial Power Supplies
- Solar Inverters

Package



TO-247-2



Maximum Ratings (T_C = 25°C Unless Otherwise Specified)

Symbol	Parameter	Value	Unit	Test Conditions	Note
V_{RRM}	Repetitive Peak Reverse Voltage	2000	V		
I_F	Continuous Forward Current	15 5	A	T_C = 25°C T_C = 150°C	
I_{FRM}	Repetitive Peak Forward Surge Current	29	A	T_C = 25°C, t_p = 10 ms, Half Sine Pulse	
I_{FSM}	Non-Repetitive Peak Forward Surge Current	36	A	T_C = 25°C, t_p = 10 ms, Half Sine Pulse	
T_{stg}, T_J	Storage and Operating Junction Temperature Range	-55 to +175	°C		

Electrical Characteristics

Symbol	Parameter	Typ.	Max.	Unit	Test Conditions	Note
V_F	Forward Voltage	1.45 2.15	1.80 3.00	V	I_F = 5 A, T_J = 25°C I_F = 5 A, T_J = 175°C	
I_R	Reverse Current	1 20	100 200	μA	V_R = 1900 V, T_J = 25°C V_R = 1900 V, T_J = 175°C	
Q_{Cj}	Total Capacitive Charge	35		nC	V_R = 1100 V, T_J = 25°C $Q_C = \int_0^{V_R} C(V)dV$	
C_j	Total Capacitance	495 23 17		pF	V_R = 0 V, T_J = 25°C, f = 1 MHz V_R = 550 V, T_J = 25°C, f = 1 MHz V_R = 1100 V, T_J = 25°C, f = 1 MHz	
E_C	Capacitance Stored Energy	24		μJ	V_R = 1100 V	