

Battery Isolation Diode

Description

The **240NQ045** high current Schottky rectifier module has been optimised for very low forward voltage drop, with moderate leakage. The proprietary barrier technology allows for reliable operation up to 150°C junction temperature. Typical applications are in switching power supplies, converters, free-wheeling diodes, and reverse battery protection.

Specifications

Part Number: 240NQ

Voltage Ratings

V_R Max. DC Reverse Voltage (V): 45

V_{RWM} Max. Working Peak Reverse Voltage (V): 45

Features

- 150°C T_J operations
- Unique high power, Half-Pak module
- Replaces four parallel DO-5's
- Easier to mount and lower profile than DO-5's
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Very low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability



Absolute Maximum Current Ratings

Parameters		Value	Units	Conditions
$I_{F(AV)}$	Max. average forward current	240	A	50% duty cycle @ $T_C = 96^\circ\text{C}$, rectangular wave form
I_{FSM}	Max. peak one cycle non-repetitive	26,000	A	5 μs Sine or 3 μs Rect. Pulse
		3,400		10ms Sine or 6ms Rect. Pulse
E_{AS}	Non-repetitive avalanche energy	324	M_J	$T_J = 25^\circ\text{C}$, $I_{AS} = 48$ Amps, $L = 0.28\text{mH}$
I_{AR}	Repetitive avalanche current	48	A	Current decaying linearly to zero in 1 μsec Frequency limited by T_J max. $V_A = 1.5 \times V_R$ typical

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