

### General Description

The MDF5N50 uses advanced MagnaChip's MOSFET Technology, which provides low on-state resistance, high switching performance and excellent quality.

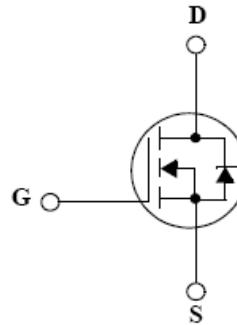
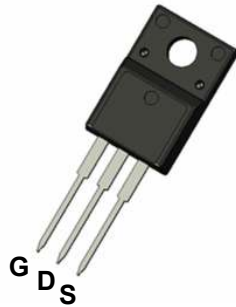
MDF5N50 is suitable device for SMPS, high Speed switching and general purpose applications.

### Features

- $V_{DS} = 500V$
- $I_D = 5.0A$  @  $V_{GS} = 10V$
- $R_{DS(ON)} \leq 1.4\Omega$  @  $V_{GS} = 10V$

### Applications

- Power Supply
- PFC
- Ballast



### Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DSS}$	500	V
Gate-Source Voltage	$V_{GSS}$	±30	V
Continuous Drain Current (*)	$I_D$	$T_C=25^\circ C$	5.0 A
		$T_C=100^\circ C$	3.2 A
Pulsed Drain Current <sup>(1)</sup>	$I_{DM}$	20	A
Power Dissipation	$P_D$	$T_C=25^\circ C$	27 W
		Derate above 25 °C	0.22 W/°C
Peak Diode Recovery $dv/dt$ <sup>(3)</sup>	$Dv/dt$	4.5	V/ns
Single Pulse Avalanche Energy <sup>(4)</sup>	$E_{AS}$	230	mJ
Junction and Storage Temperature Range	$T_J, T_{stg}$	-55~150	°C

\* Id limited by maximum junction temperature

### Thermal Characteristics

Characteristics	Symbol	Rating	Unit
Thermal Resistance, Junction-to-Ambient <sup>(1)</sup>	$R_{\theta JA}$	62.5	°C/W
Thermal Resistance, Junction-to-Case <sup>(1)</sup>	$R_{\theta JC}$	4.6	