RoHS Compliant
HALOGEN-FREE

MagnaChip

MDS1653

Single N-Channel Trench MOSFET 30V, 12A, 12mΩ

General Description

The MDS1653 uses advanced MagnaChip's MOSFET Technology, which provides low on-state resistance, high switching performance and excellent reliability.

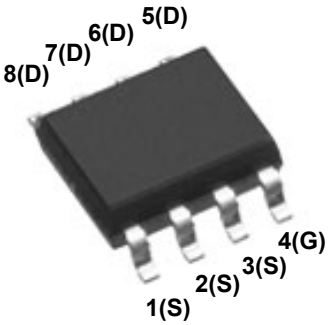
MDS1653 is suitable device for DC-DC Converters and general purpose applications.

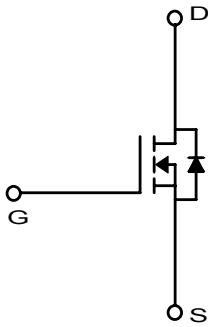
Features

- V_{DS} = 30V
- I_D = 12A @V_{GS} = 10V
- $R_{DS(ON)}$
  < 12.0mΩ @V_{GS} = 10V
  < 17.5mΩ @V_{GS} = 4.5V

Applications

- DC-DC Converters





Absolute Maximum Ratings (Ta = 25°C)

Characteristics		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	30	V
Gate-Source Voltage		V_{GSS}	±20	V
Continuous Drain Current	T_a=25°C	I_D	12	A
	T_a=100°C		8.6	A
Pulsed Drain Current		I_{DM}	50	A
Power Dissipation (1)	T_a=25°C	P_D	2.5	W
	T_a=100°C		1.25	
Single Pulse Avalanche Energy (2)		E_{AS}	50	mJ
Junction and Storage Temperature Range		T_J, T_{stg}	-55~150	°C

Thermal Characteristics

Characteristics	Symbol	Rating	Unit
Thermal Resistance, Junction-to-Ambient (1)	$R_{\theta JA}$	50	°C/W
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	25	