TCS10N10

N-Channel 100V,100A,4.75mΩ Power MOSFET

Description

These N-Channel enhancement mode power field effect transistors are using **shielded gate trench** DMOS technology. This advanced technology has been especially tailored to minimize on-state resistance,provide superior switching performance, and with stand high energy pulse in the avalanche and commutation mode. These devices are well suited for high efficiency fast switching applications.

Features

- 100V,100A,$R_{DS(on).max}$=4.75mΩ@V_{GS} = 10V
- Improved dv/dt capability
- Fast switching
- 100% EAS Guaranteed
- Green device available

Ideal for applications

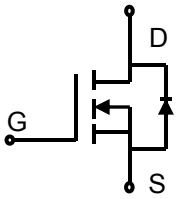
- DC-DC Converter
- High-frequency switching and synchronous rectification

Product Summary

V_{DSS}	100V
$R_{DS(on).typ}$ @V_{GS}=10V	4.3mΩ
I_D	100A

Pin Configuration

DFN5×6



N-Channel MOSFET

Absolute Maximum Ratings

T_C = 25°C unless otherwise noted

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	100	V
Continuous drain current (T_C = 25°C ,Silicon limit)	I_D	108	A
(T_C = 25°C, Package limit)		100	A
(T_C = 100°C,Silicon limit)		68.5	A
Pulsed drain current [1]	I_{DM}	400	A
Gate-Source voltage	V_{GSS}	±20	V
Avalanche energy [2]	E_{AS}	361	mJ
Power Dissipation	P_D	99	W
Storage Temperature Range	T_{STG}	-55 to +150	°C
Operating Junction Temperature Range	T_J	-55 to +150	°C

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	1.26	°C/W
Thermal Resistance, Junction-to-Ambient [3]	$R_{\theta JA}$	75	°C/W
Soldering temperature, wavesoldering only allowed at leads. (1.6mm from case for 10s)	T_{sold}	260	°C