

### Description

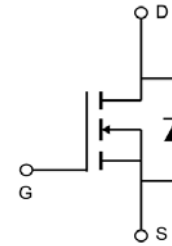
The TCS1616N01 uses advanced trench technology to provide excellent  $R_{DS(ON)}$  and low gate charge. It can be used in a wide variety of applications.

### General Features

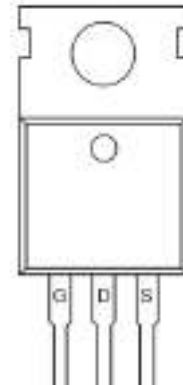
- $V_{DS} = 60V$ ,  $I_D = 160A$
- $R_{DS(ON)} < 3.5m\Omega @ V_{GS}=10V$
- High Power and current handling capability
- Lead free product is acquired
- Surface Mount Package

### Application

- Motor control and drive
- Battery management
- Uninterruptible Power Supply



Schematic diagram



Marking and pin assignment



TO-220

### Absolute Maximum Ratings (TC=25°C unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	60	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Drain Current-Continuous	$I_D$	160	A
Drain Current-Continuous (TC=100°C)	$I_D$	115	A
Pulsed Drain Current (Note 1)	$I_{DM}$	640	A
Maximum Power Dissipation	$P_D$	254	W
Avalanche Energy (L=0.5mH)	$E_{AS}$	353	mJ
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 To 175	°C

### Thermal Characteristic

Thermal Resistance, Junction-to-Case <sup>(Note 2)</sup>	$R_{\theta JC}$	0.59	°C/W
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