

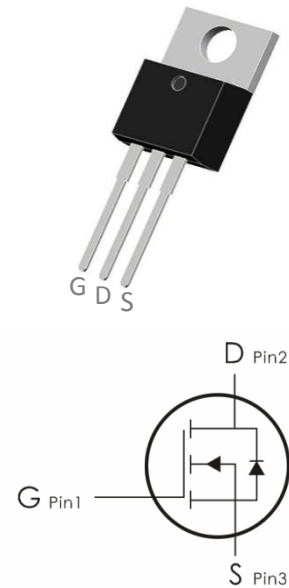
Description:

This N-Channel MOSFET uses advanced trench technology and design to provide excellent $R_{DS(on)}$ with low gate charge.

It can be used in a wide variety of applications.

Features:

- 1) $V_{DS}=60V, I_D=50A, R_{DS(ON)} < 22m\Omega @ V_{GS}=10V$
- 2) Low gate charge.
- 3) Green device available.
- 4) Advanced high cell density trench technology for ultra $R_{DS(ON)}$.
- 5) Excellent package for good heat dissipation.



Absolute Maximum Ratings: ($T_C=25^\circ C$ unless otherwise noted)

Symbol	Parameter	Ratings	Units
V_{DS}	Drain-Source Voltage	60	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Continuous Drain Current-	50	A
	Continuous Drain Current- $T_C=100^\circ C$	35.4	
	Pulsed Drain Current	200	
E_{AS}	Single Pulse Avalanche Energy	490	mJ
P_D	Power Dissipation	120	W
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 to +150	$^\circ C$

Electrical Characteristics: ($T_C=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
Off Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250 μ A	60	---	---	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{GS} =0V, V _{DS} =60V	---	---	1	μ A
I _{GSS}	Gate-Source Leakage Current	V _{GS} =± 20V, V _{DS} =0A	---	---	± 100	nA
On Characteristics						
V _{GS(th)}	GATE-Source Threshold Voltage	V _{GS} =V _{DS} , I _D =250 μ A	2	---	4	V
R _{DS(ON)}	Drain-Source On Resistance	V _{GS} =10V, I _D =70A	---	18	22	m Ω
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{DS} =25V, V _{GS} =0V, f=1MHz	---	1050	1365	pF
C _{oss}	Output Capacitance		---	460	600	
C _{rss}	Reverse Transfer Capacitance		---	70	90	
Switching Characteristics						
t _{d(on)}	Turn-On Delay Time	V _{DD} =30V, I _D =25A, R _{GEN} =25 Ω .	---	20	50	ns
t _r	Rise Time		---	100	210	ns
t _{d(off)}	Turn-Off Delay Time		---	80	170	ns
t _f	Fall Time		---	85	180	ns
Q _g	Total Gate Charge	V _{GS} =10V, V _{DS} =48V, I _D =50A	---	32	42	nC

Typical Characteristics: ($T_c=25^\circ\text{C}$ unless otherwise noted)

