

General Description

The CMN3406M uses advanced trench technology to provide excellent RDS(ON) and low gate charge. This device is suitable for use as a load switch or in PWM applications.

Features

- RDS(ON)<42mΩ@VGS=10V
- RDS(ON)<58mΩ@VGS=4.5V
- Surface mount package

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V _{DS}	Drain-Source Voltage	30	V
V _{GS}	Gate-Source Voltage	±20	V
I _D @T _C =25°C	Continuous Drain Current	4.0	A
I _{DM}	Pulsed Drain Current	12	A
P _D @T _C =25°C	Total Power Dissipation	1.4	W
T _{STG}	Storage Temperature Range	-55 to 150	°C
T _J	Operating Junction Temperature Range	-55 to 150	°C

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
R _{θJA}	Thermal Resistance Junction-ambient (Steady State)	---	125	°C/W

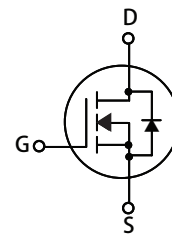
Product Summary

BVDSS	RDSON	ID
30V	42mΩ	4.0A

Applications

- PWM applications
- Load switch
- Power management
- PA Switch

SOT-23 Pin Configuration



Type	Package	Marking
CMN3406M	SOT-23	B6M

N-Channel Enhancement Mode Field Effect Transistor

Electrical Characteristics (T_J=25 °C, unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250uA	30	---	---	V
R _{DS(ON)}	Static Drain-Source On-Resistance	V _{GS} =10V, I _D =5.8A	---	---	42	mΩ
		V _{GS} =4.5V, I _D =5A	---	---	58	
V _{GS(th)}	Gate Threshold Voltage	V _{GS} =V _{DS} , I _D =250uA	1	---	2.5	V
I _{DSS}	Drain-Source Leakage Current	V _{DS} =24V, V _{GS} =0V	---	---	1	uA
I _{GSS}	Gate-Source Leakage Current	V _{GS} =±20V, V _{DS} =0V	---	---	±100	nA
g _{fs}	Forward Transconductance	V _{DS} =5V, I _D =3A	---	5	---	S
Q _g	Total Gate Charge	I _D =3.6A V _{DS} =15V V _{GS} =10V	---	4.0	---	nC
Q _{gs}	Gate-Source Charge		---	0.8	---	
Q _{gd}	Gate-Drain Charge		---	1.2	---	
T _{d(on)}	Turn-On Delay Time	V _{DS} =15V R _G =3Ω R _L =2.2Ω V _{GS} =10V	---	5.0	---	ns
T _r	Rise Time		---	1.6	---	
T _{d(off)}	Turn-Off Delay Time		---	19	---	
T _f	Fall Time		---	16	---	
C _{iss}	Input Capacitance	V _{DS} =15V, V _{GS} =0V, f=1MHz	---	280	---	pF
C _{oss}	Output Capacitance		---	35	---	
C _{rss}	Reverse Transfer Capacitance		---	23	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V _{SD}	Diode Forward Voltage	V _{GS} =0V, I _S =1A	---	---	1.2	V

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