CMD7N60/CMU7N60

600V N-Channel MOSFET

General Description

The 7N60 have been fabricated using an advanced high voltage MOSFET process that is designed to deliver high levels of performance and robustness in popular AC-DC applications.

Product Summary

BVDSS	RDSON	ID
600V	1.2Ω	7A

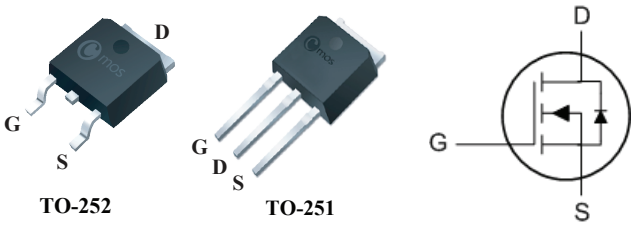
Applications

- DC-DC Converters
- Power switching application

Features

- Fast switching
- 100% avalanche tested
- Improved dv/dt capability
- RoHS Compliant

TO-252/251 Pin Configuration



Type	Package	Marking
CMD7N60	TO-252	CMD7N60
CMU7N60	TO-251	CMU7N60

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	600	V
V_{GS}	Gate-Source Voltage	±30	V
I_D@T_C=25℃	Continuous Drain Current	7	A
I_D@T_C=100℃	Continuous Drain Current	5.6	A
I_{DM}	Pulsed Drain Current	28	A
EAS	Single Pulse Avalanche Energy	770	mJ
P_D	Total Power Dissipation	97	W
T_{STG}	Storage Temperature Range	-55 to 175	℃
T_J	Operating Junction Temperature Range	-55 to 175	℃

Thermal Data

Symbol	Parameter	Rating	Unit
$R_{\theta JA}$	Thermal Resistance Junction-ambient	60	℃/W
$R_{\theta JC}$	Thermal Resistance Junction-case	1.29	℃/W

Electrical Characteristics (T_J=25℃ , unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V , I_D=250μA	600	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	V_{GS}=10V , I_D=3.5A	---	---	1.2	Ω
$V_{GS(th)}$	Gate Threshold Voltage	V_{GS}=V_{DS} , I_D =250uA	3.0	---	5.0	V
I_{DSS}	Drain-Source Leakage Current	V_{DS}=600V,V_{GS}=0V	---	---	1	uA
I_{GSS}	Gate-Source Leakage Current	V_{GS} = ±30V , V_{DS}=0V	---	---	±100	nA
gfs	Forward Transconductance	V_{DS} = 20V , I_D =3.5A	---	10	---	S
R_g	Gate Resistance	V_{DS}=0V , V_{GS}=0V , f=1MHz	---	6	---	Ω
Q_g	Total Gate Charge	I_D=7A V_{DS} =480V V_{GS} =10V	---	23	---	nC
Q_{gs}	Gate-Source Charge		---	5	---	
Q_{gd}	Gate-Drain Charge		---	14	---	
$T_{d(on)}$	Turn-On Delay Time	V_{DD} =300V, I_D =7A R_G=25Ω ,V_{GS} =10V	---	16	---	ns
T_r	Rise Time		---	19	---	
$T_{d(off)}$	Turn-Off Delay Time		---	81	---	
T_f	Fall Time		---	36	---	
C_{iss}	Input Capacitance	V_{DS}=25V , V_{GS}=0V , f=1MHz	---	1200	---	pF
C_{oss}	Output Capacitance		---	110	---	
C_{rss}	Reverse Transfer Capacitance		---	15	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I_S	Continuous Source Current	V_G=V_D=0V , Force Current	---	---	7	A
I_{SM}	Pulsed Source Current		---	---	28	A
V_{SD}	Diode Forward Voltage	V_{GS}=0V , I_S=7A , T_J=25℃	---	---	1.2	V

Note :

This product has been designed and qualified for the counsumer market.
Cmos assumes no liability for customers' product design or applications.
Cmos reserver the right to improve product design ,functions and reliability wihtout notice.