CMSA30N06T

Dual N-Channel Enhancement Mode MOSFET

General Description

The CMSA30N06T uses advanced trench technology to provide excellent RDS (ON), This device is suitable for use in high performance automotive applications.

Product Summary

BVDSS	RDSON	ID
60V	19mΩ	30A

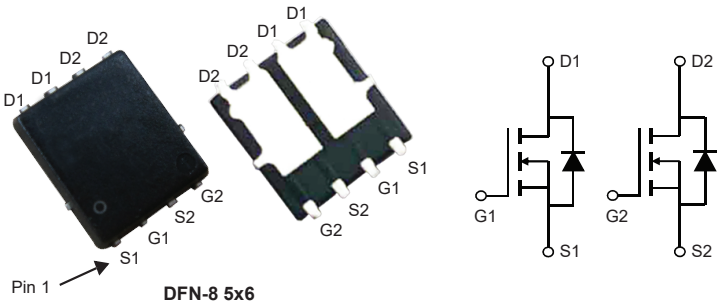
Applications

- Switching applications
- Motor Drive
- Automotive

Features

- Dual N-Channel MOSFET
- 100% avalanche tested
- Small Footprint (5x6mm) for Compact Design
- RoHS Compliant

DFN-8 5x6 Pin Configuration



DFN-8 5x6

Type	Package	Marking
CMSA30N06T	DFN-8 5*6	CMSA30N06T

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	60	V
V_{GS}	Gate-Source Voltage	±20	V
I_D@T_C=25℃	Continuous Drain Current	30	A
I_{DM}	Pulsed Drain Current	120	A
P_D@T_C=25℃	Total Power Dissipation	50	W
T_{STG}	Storage Temperature Range	-55 to 175	℃
T_J	Operating Junction Temperature Range	-55 to 175	℃

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient(Steady State)	---	35	℃/W
$R_{\theta JC}$	Thermal Resistance Junction -Case(Steady State)	---	5.5	℃/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=250uA	60	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	V_{GS}=10V , I_D=15A	---	---	19	mΩ
		V_{GS}=4.5V , I_D=10A	---	---	23	
$V_{GS(th)}$	Gate Threshold Voltage	V_{GS}=V_{DS} , I_D =250μA	1	---	3	V
I_{DSS}	Drain-Source Leakage Current	V_{DS}=60V , V_{GS}=0V	---	---	1	uA
I_{GSS}	Gate-Source Leakage Current	V_{GS}= ±20V, V_{DS}=0V	---	---	±100	nA
gfs	Forward Transconductance	V_{DS}=5V , I_D=10A	---	18	---	S
R_g	Gate Resistance	V_{DS}=0V , V_{GS}=0V , f=1MHz	---	3	---	Ω
Q_g	Total Gate Charge	V_{DD}=30V , I_D=11A V_{GS}=4.5 V	---	7	---	nC
Q_{gs}	Gate-Source Charge		---	5	---	
Q_{gd}	Gate-Drain Charge		---	1.5	---	
$T_{d(on)}$	Turn-On Delay Time	V_{DD}=30V , V_{GEN}=10V , R_G=1Ω R_L =3.45Ω , I_D=8.7A	---	10	---	ns
T_r	Rise Time		---	26	---	
$T_{d(off)}$	Turn-Off Delay Time		---	21	---	
T_f	Fall Time		---	11	---	
C_{iss}	Input Capacitance	V_{DS}=30V , V_{GS}=0V , f=1MHz	---	3100	---	pF
C_{oss}	Output Capacitance		---	435	---	
C_{rss}	Reverse Transfer Capacitance		---	20	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I_S	Diode continuous forward current	V_G=V_D=0V , Force Current	---	---	30	A
$I_{S,pulse}$	Diode pulse current		---	---	120	A
V_{SD}	Diode Forward Voltage	V_{GS}=0V , I_S=10A , Tj=25℃	---	---	1.2	V

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.

Package Dimensions

DFN-8 5x6