

General Description

The 6760A 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

- Low On-Resistance
- 100% avalanche tested
- RoHS Compliant

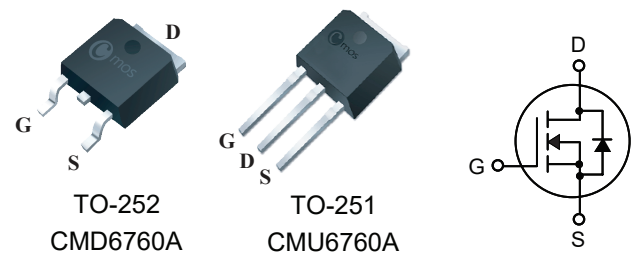
Product Summary

BVDSS	RDSON	ID
25V	2.5mΩ	120A

Applications

- Uninterruptible Power Supply
- DC Motor Control
- Load Switch

TO-252/251 Pin Configuration



Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	25	V
V_{GS}	Gate-Source Voltage	±16	V
$I_D@T_C=25^{\circ}C$	Continuous Drain Current	120	A
$I_D@T_C=100^{\circ}C$	Continuous Drain Current	90	A
I_{DM}	Pulsed Drain Current	480	A
EAS	Single Pulse Avalanche Energy ¹	448	mJ
$P_D@T_C=25^{\circ}C$	Total Power Dissipation	65	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
$R_{\theta JA}$	Thermal Resistance Junction-ambient	---	40	°C/W
$R_{\theta JC}$	Thermal Resistance Junction-case	---	1.92	°C/W

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

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$, $I_D=250\mu A$	25	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=10V$, $I_D=28A$	---	2	2.5	$m\Omega$
		$V_{GS}=4.5V$, $I_D=25A$	---	2.3	3	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}$, $I_D=250\mu A$	1.0	---	3.0	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=20V$, $V_{GS}=0V$	---	---	1	μA
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 16V$, $V_{DS}=0V$	---	---	± 100	nA
g_{fs}	Forward Transconductance	$V_{DS}=5V$, $I_D=20A$	---	60	---	S
Q_g	Total Gate Charge	$I_D=30A$	---	140	---	nC
Q_{gs}	Gate-Source Charge	$V_{DS}=20V$	---	19	---	
Q_{gd}	Gate-Drain Charge	$V_{GS}=10V$	---	42	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DD}=13V$, $I_D=30A$ $R_G=4.7\Omega$, $V_{GS}=10V$	---	16	---	ns
T_r	Rise Time		---	65	---	
$T_{d(off)}$	Turn-Off Delay Time		---	160	---	
T_f	Fall Time		---	78	---	
C_{iss}	Input Capacitance	$V_{DS}=25V$, $V_{GS}=0V$, $f=1MHz$	---	6500	---	pF
C_{oss}	Output Capacitance		---	1150	---	
C_{rss}	Reverse Transfer Capacitance		---	90	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I_S	Continuous Source Current	$V_G=V_D=0V$, Force Current	---	---	120	A
I_{SM}	Pulsed Source Current		---	---	480	A
V_{SD}	Diode Forward Voltage	$V_{GS}=0V$, $I_F=20A$, $T_J=25^{\circ}\text{C}$	---	0.82	1.2	V

Notes:

1.The EAS data shows Max. rating .The test condition is $V_{DS}=25V$, $V_{GS}=10V$, $L=0.8mH$, $I_{AS}=33.5A$.

This product has been designed and qualified for the consumer market.

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Cmos reserves the right to improve product design ,functions and reliability without notice.

Typical Characteristics

