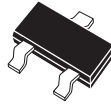




CMPDM8002A

**SURFACE MOUNT
P-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET**



SOT-23 CASE

APPLICATIONS:

- Load/Power switches
- Power supply converter circuits
- Battery powered portable equipment

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Drain-Source Voltage
Drain-Gate Voltage
Gate-Source Voltage
Continuous Drain Current
Continuous Source Current (Body Diode)
Maximum Pulsed Drain Current
Maximum Pulsed Source Current
Power Dissipation
Operating and Storage
Junction Temperature
Thermal Resistance

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPDM8002A is an Enhancement-mode P-Channel Field Effect Transistor, manufactured by the P-Channel DMOS Process, designed for high speed pulsed amplifier and driver applications.

MARKING CODE: C802A

FEATURES:

- Low $r_{DS(ON)}$
- Low $V_{DS(ON)}$
- Low threshold voltage
- Fast switching
- Logic level compatibility

SYMBOL		UNITS
V_{DS}	50	V
V_{DG}	50	V
V_{GS}	20	V
I_D	280	mA
I_S	280	mA
I_{DM}	1.5	A
I_{SM}	1.5	A
P_D	350	mW
T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
Θ_{JA}	357	$^\circ\text{C/W}$

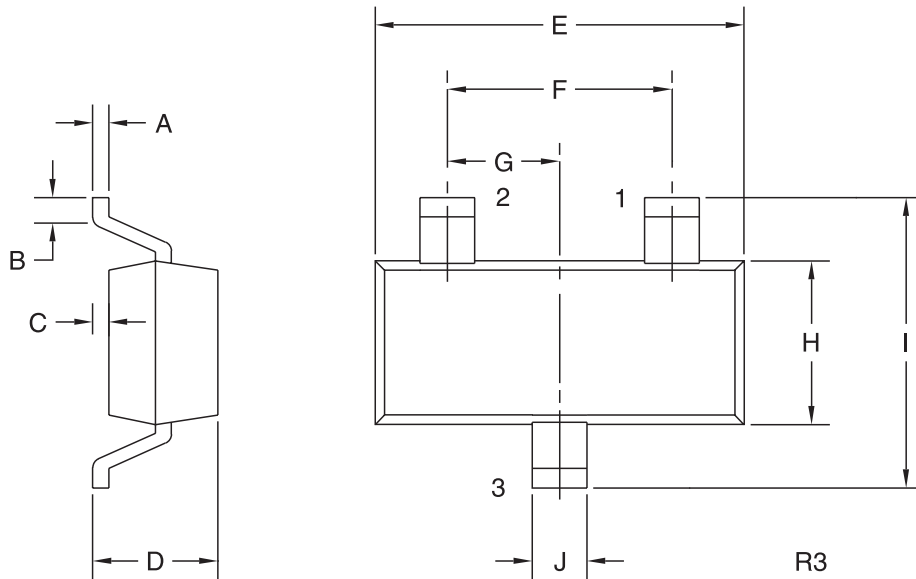
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{GSSF}	$V_{GS}=20V, V_{DS}=0V$		100	nA
I_{GSSR}	$V_{GS}=20V, V_{DS}=0V$		100	nA
I_{DSS}	$V_{DS}=50V, V_{GS}=0V$		1.0	μA
I_{DSS}	$V_{DS}=50V, V_{GS}=0V, T_J=125^\circ\text{C}$		500	μA
$I_{D(ON)}$	$V_{GS}=10V, V_{DS}=10V$	500		mA
BV_{DSS}	$V_{GS}=0V, I_D=10\mu\text{A}$	50		V
$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	1.0	2.5	V
$V_{DS(ON)}$	$V_{GS}=10V, I_D=500\text{mA}$		1.5	V
$V_{DS(ON)}$	$V_{GS}=5.0V, I_D=50\text{mA}$		0.15	V
V_{SD}	$V_{GS}=0V, I_S=115\text{mA}$		1.3	V
$r_{DS(ON)}$	$V_{GS}=10V, I_D=500\text{mA}$		2.5	Ω
$r_{DS(ON)}$	$V_{GS}=10V, I_D=500\text{mA}, T_J=125^\circ\text{C}$		4.0	Ω
$r_{DS(ON)}$	$V_{GS}=5.0V, I_D=50\text{mA}$		3.0	Ω
$r_{DS(ON)}$	$V_{GS}=5.0V, I_D=50\text{mA}, T_J=125^\circ\text{C}$		5.0	Ω

ELECTRICAL CHARACTERISTICS: continued ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
g_{FS}	$V_{DS}=10\text{V}, I_D=200\text{mA}$	200		mmhos
C_{rss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		7.0	pF
C_{iss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		70	pF
C_{oss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		15	pF
t_{on}	$V_{DD}=30\text{V}, V_{GS}=10\text{V}, I_D=200\text{mA}$		20	ns
t_{off}	$R_G=25\Omega, R_L=150\Omega$		20	ns

SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) GATE
- 2) SOURCE
- 3) DRAIN

MARKING CODE: C802A

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

R0 (25-July 2007)