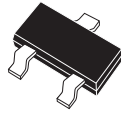


**CMPDM7002A**

**N-CHANNEL  
ENHANCEMENT-MODE  
SURFACE MOUNT MOSFET**



**SOT-23 CASE**

**Central<sup>TM</sup>**  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPDM7002A is special version of the 2N7002 Enhancement-mode N-Channel Field Effect Transistor, manufactured by the N-Channel DMOS Process, designed for high speed pulsed amplifier and driver applications. This special device offers low  $r_{DS(ON)}$  and low  $V_{DS(ON)}$ .

**Marking Code is C702A.**

**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

**SYMBOL**

$V_{DS}$	60
$V_{DG}$	60
$V_{GS}$	40
$I_D$	280
$I_S$	280
$I_{DM}$	1.5
$I_{SM}$	1.5
$P_D$	350

**UNITS**

V
V
V
mA
mA
A
A
mW
$^\circ\text{C}$
$^\circ\text{C/W}$

$T_J, T_{stg}$	-65 to +150
$\theta_{JA}$	357

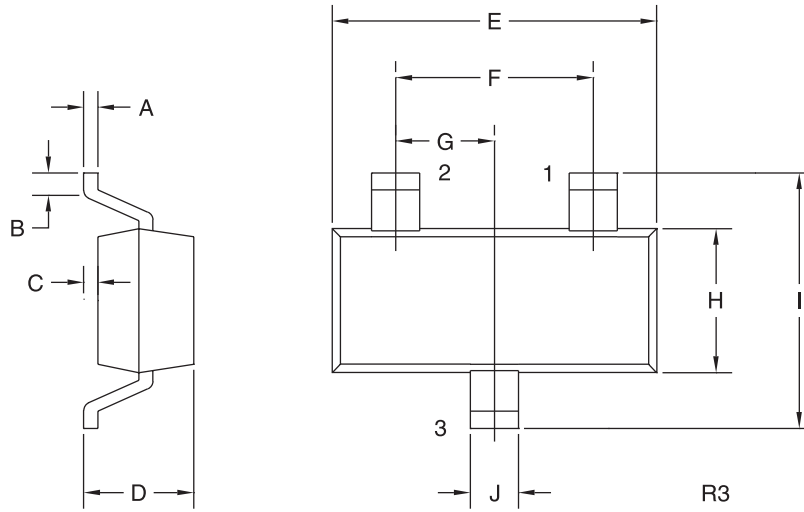
**ELECTRICAL CHARACTERISTICS** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{GSSF}$	$V_{GS}=20\text{V}, V_{DS}=0\text{V}$		100	nA
$I_{GSSR}$	$V_{GS}=20\text{V}, V_{DS}=0\text{V}$		100	nA
$I_{DSS}$	$V_{DS}=60\text{V}, V_{GS}=0\text{V}$		1.0	$\mu\text{A}$
$I_{DSS}$	$V_{DS}=60\text{V}, V_{GS}=0\text{V}, T_J=125^\circ\text{C}$		500	$\mu\text{A}$
$I_{D(ON)}$	$V_{GS}=10\text{V}, V_{DS} \geq 2V_{DS(ON)}$	500		mA
$BV_{DSS}$	$V_{GS}=0\text{V}, I_D=10\mu\text{A}$	60		V
$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	1.0	2.5	V
$V_{DS(ON)}$	$V_{GS}=10\text{V}, I_D=500\text{mA}$		1.0	V
$V_{DS(ON)}$	$V_{GS}=5.0\text{V}, I_D=50\text{mA}$		0.15	V
$r_{DS(ON)}$	$V_{GS}=10\text{V}, I_D=500\text{mA}$		2.0	$\Omega$
$r_{DS(ON)}$	$V_{GS}=10\text{V}, I_D=500\text{mA}, T_J=125^\circ\text{C}$		3.5	$\Omega$
$r_{DS(ON)}$	$V_{GS}=5.0\text{V}, I_D=50\text{mA}$		3.0	$\Omega$
$r_{DS(ON)}$	$V_{GS}=5.0\text{V}, I_D=50\text{mA}, T_J=125^\circ\text{C}$		5.0	$\Omega$
gFS	$V_{DS} \geq 2V_{DS(ON)}, I_D=200\text{mA}$	80		mmhos
$C_{rss}$	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		5.0	pF
$C_{iss}$	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		50	pF
$C_{oss}$	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		25	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
$V_{SD}$	$V_{GS}=0\text{V}, I_S=400\text{mA}$		1.2	V

R0 ( 05-December 2001)

**N-CHANNEL  
ENHANCEMENT-MODE  
SURFACE MOUNT MOSFET**

**SOT-23 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) Gate
- 2) Source
- 3) Drain

**Marking Code: C702A**

DIMENSIONS				
SYMBOL	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 ( 05-December 2001)