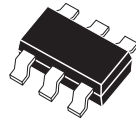


**CMXDM7002A**  
**DUAL**  
**N-CHANNEL**  
**ENHANCEMENT-MODE**  
**SURFACE MOUNT MOSFET**



**SOT-26 CASE**

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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMXDM7002A is special dual 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 Dual Transistor device offers low  $r_{DS(ON)}$  and low  $V_{DS(ON)}$ .

**Marking Code is X02A**

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

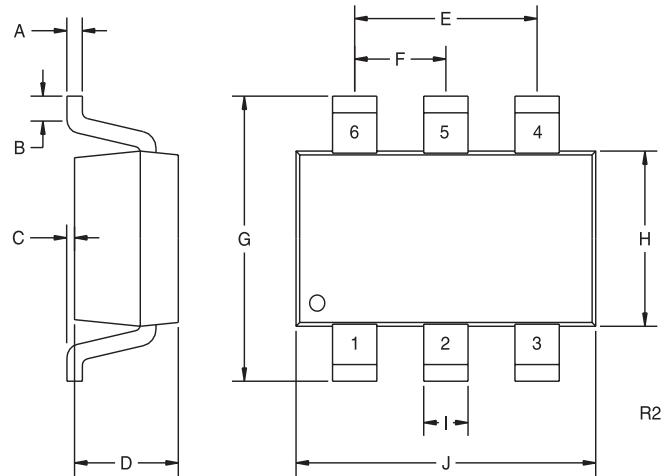
	<b>SYMBOL</b>		<b>UNITS</b>
Drain-Source Voltage	$V_{DS}$	60	V
Drain-Gate Voltage	$V_{DG}$	60	V
Gate-Source Voltage	$V_{GS}$	40	V
Continuous Drain Current	$I_D$	280	mA
Continuous Source Current (Body Diode)	$I_S$	280	mA
Maximum Pulsed Drain Current	$I_{DM}$	1.5	A
Maximum Pulsed Source Current	$I_{SM}$	1.5	A
Power Dissipation	$P_D$	350	mW
Operating and Storage			
Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	357	$^\circ\text{C/W}$

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

<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>MAX</b>	<b>UNITS</b>
$I_{GSSF}$	$V_{GS}=20\text{V}, V_{DS}=0\text{V}$		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	$\Omega$
$g_{FS}$	$V_{DS} \geq 2V_{DS(ON)}, I_D=200\text{mA}$	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)

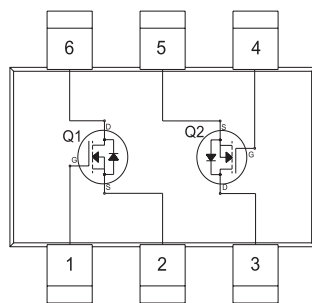
**SOT-26 CASE - MECHANICAL OUTLINE**



**Marking Code: X02A**

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.004	0.007	0.11	0.19
B	0.016	-	0.40	-
C	-	0.004	-	0.10
D	0.039	0.047	1.00	1.20
E	0.074	0.075	1.88	1.92
F	0.037	0.038	0.93	0.97
G	0.102	0.118	2.60	3.00
H	0.059	0.067	1.50	1.70
I	0.016		0.41	
J	0.110	0.118	2.80	3.00

SOT-26 (REV: R2)



**LEAD CODE:**

- 1) Gate Q1
- 2) Source Q1
- 3) Drain Q2
- 4) Gate Q2
- 5) Source Q2
- 6) Drain Q1

R0 ( 05-December 2001)