



CMSDM3590 N-CH
CMSDM7590 P-CH

**SURFACE MOUNT
N-CHANNEL AND P-CHANNEL
ENHANCEMENT-MODE
COMPLEMENTARY MOSFETS**

SUPERmini™



SOT-323 CASE

• Devices are **Halogen Free** by design

APPLICATIONS:

- Load/Power Switches
- Power Supply Converter Circuits
- Battery Powered Portable Devices

MAXIMUM RATINGS: (T_A=25°C)

Drain-Source Voltage	V _{DS}	20	V
Gate-Source Voltage	V _{GS}	8.0	V
Continuous Drain Current (Steady State)	I _D	160	140
Continuous Drain Current (t _p ≤ 5s)	I _D	200	180
Power Dissipation	P _D	275	mW
Operating and Storage Junction Temperature	T _J , T _{stg}	-65 to +150	°C
Thermal Resistance	θ _{JA}	455	°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C)

SYMBOL	TEST CONDITIONS	CMSDM3590			CMSDM7590			UNITS
		MIN	TYP	MAX	MIN	TYP	MAX	
I _{GSSF} , I _{GSSR}	V _{GS} =5.0V, V _{DS} =0V	-	-	100	-	-	100	nA
I _{DSS}	V _{DS} =5.0V, V _{GS} =0V	-	-	50	-	-	50	nA
I _{DSS}	V _{DS} =16V, V _{GS} =0V	-	-	100	-	-	100	nA
BV _{DSS}	V _{GS} =0V, I _D =250μA	20	-	-	20	-	-	V
V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.4	-	1.0	0.4	-	1.0	V
r _{DS(ON)}	V _{GS} =4.5V, I _D =100mA	-	1.5	3.0	-	4.0	5.0	Ω
r _{DS(ON)}	V _{GS} =2.5V, I _D =50mA	-	2.0	4.0	-	5.5	7.0	Ω
r _{DS(ON)}	V _{GS} =1.8V, I _D =20mA	-	3.0	6.0	-	8.0	10	Ω
r _{DS(ON)}	V _{GS} =1.5V, I _D =10mA	-	4.0	10	-	11	17	Ω
r _{DS(ON)}	V _{GS} =1.2V, I _D =1.0mA	-	7.0	-	-	20	-	Ω
g _{FS}	V _{DS} =5.0V, I _D =125mA	-	1.3	-	-	1.3	-	S
C _{rss}	V _{DS} =15V, V _{GS} =0V, f=1.0MHz	-	2.2	-	-	1.0	-	pF
C _{iss}	V _{DS} =15V, V _{GS} =0V, f=1.0MHz	-	9.0	-	-	12	-	pF
C _{oss}	V _{DS} =15V, V _{GS} =0V, f=1.0MHz	-	3.0	-	-	2.7	-	pF
t _{on}	V _{DD} =10V, V _{GS} =4.5V, I _D =200mA	-	40	-	-	60	-	ns
t _{off}	V _{DD} =10V, V _{GS} =4.5V, I _D =200mA	-	150	-	-	210	-	ns

Central™

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMSDM3590 and CMSDM7590 are complementary N-Channel and P-Channel Enhancement-mode silicon MOSFETs designed for high speed pulsed amplifier and driver applications. These devices offer desirable MOSFET electrical characteristics in an economical industry standard SOT-323 package.

**MARKING CODES: CMSDM3590: 35C
CMSDM7590: 75C**

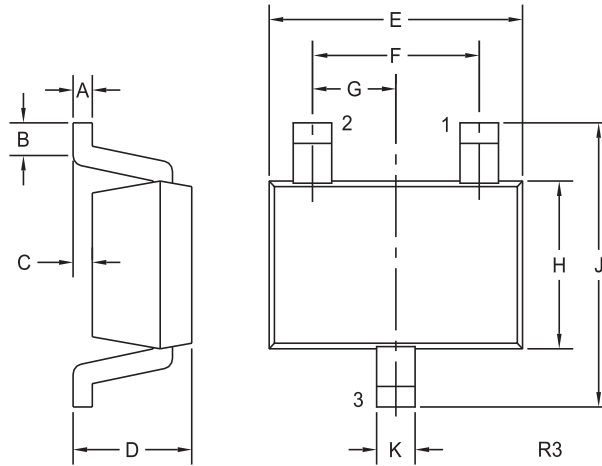
FEATURES:

- ESD Protection up to 2kV
- Power Dissipation: 275mW
- Low Threshold Voltage
- Logic Level Compatibility
- Small SOT-323 Surface Mount Package

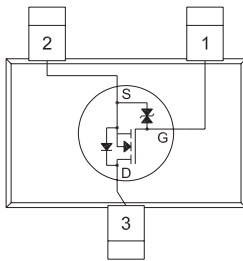
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V _{GS}		8.0	V
I _D	160	140	mA
I _D	200	180	mA
P _D		275	mW
T _J , T _{stg}		-65 to +150	°C
θ _{JA}		455	°C/W

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SOT-323 CASE - MECHANICAL OUTLINE



PIN CONFIGURATIONS

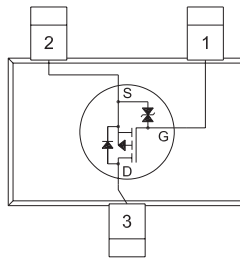


CMSDM3590

LEAD CODE:

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

MARKING CODE: 35C



CMSDM7590

LEAD CODE:

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

MARKING CODE: 75C

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.002	0.008	0.05	0.20
B	0.004	-	0.10	-
C	-	0.004	-	0.10
D	0.031	0.043	0.80	1.10
E	0.071	0.087	1.80	2.20
F	0.051		1.30	
G	0.026		0.65	
H	0.045	0.053	1.15	1.35
J	0.079	0.087	2.00	2.20
K	0.008	0.016	0.20	0.40

SOT-323 (REV: R3)