

CMNDM8001

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



www.centrasemi.com

FEMTOmini™



SOT-953 CASE

• Device is *Halogen Free* by design

APPLICATIONS:

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

MAXIMUM RATINGS: (T_A=25°C)

Drain-Source Voltage
Gate-Source Voltage
Continuous Drain Current (Steady State)
Continuous Drain Current
Power Dissipation
Operating and Storage Junction Temperature

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMNDM8001 is a P-Channel Enhancement-mode Silicon MOSFET, manufactured by the P-Channel DMOS Process, designed for high speed pulsed amplifier and driver applications. This MOSFET offers Low r_{DS(ON)} and Low Threshold Voltage.

MARKING CODE: BC

FEATURES:

- Low 0.5mm Package Profile
- Low r_{DS(ON)}
- Low Threshold Voltage
- Logic Level Compatible
- Small, FEMTOmini™ 1.0 x 0.8mm, SOT-953 Surface Mount Package

SYMBOL		UNITS
V _{DS}	20	V
V _{GS}	10	V
I _D	100	mA
I _D	200	mA
P _D	250	mW
T _J , T _{stg}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{GSSF} , I _{GSSR}	V _{GS} =10V, V _{DS} =0			1.0	µA
I _{DSS}	V _{DS} =20V, V _{GS} =0			1.0	µA
BV _{DSS}	V _{GS} =0, I _D =100µA	20			V
V _{GS(th)}	V _{DS} =V _{GS} , I _D =250µA	0.6		1.1	V
r _{DS(ON)}	V _{GS} =4.0V, I _D =10mA		1.9	8.0	Ω
r _{DS(ON)}	V _{GS} =2.5V, I _D =10mA		2.4	12	Ω
r _{DS(ON)}	V _{GS} =1.5V, I _D =1.0mA			45	Ω
Q _{g(tot)}	V _{DS} =10V, V _{GS} =4.5V, I _D =100mA		0.658		nC
Q _{gs}	V _{DS} =10V, V _{GS} =4.5V, I _D =100mA		0.158		nC
Q _{gd}	V _{DS} =10V, V _{GS} =4.5V, I _D =100mA		0.181		nC
gFS	V _{DS} =10V, I _D =100mA	100			mS
C _{rss}	V _{DS} =3.0V, V _{GS} =0, f=1.0MHz		15		pF
C _{iss}	V _{DS} =3.0V, V _{GS} =0, f=1.0MHz		45		pF
C _{oss}	V _{DS} =3.0V, V _{GS} =0, f=1.0MHz		15		pF
t _{on}	V _{DD} =3.0V, V _{GS} =2.5V, I _D =10mA		35		ns
t _{off}	V _{DD} =3.0V, V _{GS} =2.5V, I _D =10mA		80		ns

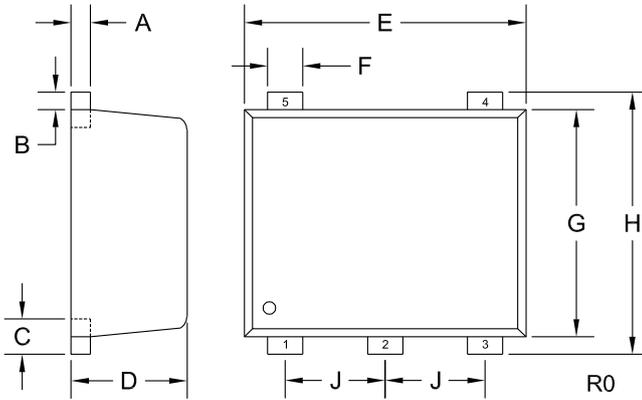
R3 (22-August 2011)

CMNDM8001

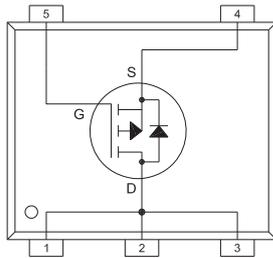
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SOT-953 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

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

MARKING CODE: BC

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.002	0.006	0.050	0.150
B	0.002	0.006	0.050	0.150
C	0.005	0.007	0.125	0.175
D	0.016	0.020	0.400	0.500
E	0.037	0.041	0.950	1.050
F	0.004	0.008	0.100	0.200
G	0.030	0.033	0.750	0.850
H	0.037	0.041	0.950	1.050
J	0.014		0.350	

SOT-953 (REV: R0)

R3 (22-August 2011)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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