

CMRDM3575

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

ATTOmini™



SOT-963 CASE

- Device is **Halogen Free** by design

APPLICATIONS:

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

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

Drain-Source Voltage
Gate-Source Voltage
Continuous Drain Current (Steady State)
Continuous Drain Current, $t_p \leq 5.0\text{s}$
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

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

SYMBOL	TEST CONDITIONS
I_{GSSF}, I_{GSSR}	$V_{GS}=5.0\text{V}, V_{DS}=0$
I_{DSS}	$V_{DS}=5.0\text{V}, V_{GS}=0$
I_{DSS}	$V_{DS}=16\text{V}, V_{GS}=0$
BV_{DSS}	$V_{GS}=0, I_D=250\mu\text{A}$
$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$
$r_{DS(ON)}$	$V_{GS}=4.5\text{V}, I_D=100\text{mA}$
$r_{DS(ON)}$	$V_{GS}=2.5\text{V}, I_D=50\text{mA}$
$r_{DS(ON)}$	$V_{GS}=1.8\text{V}, I_D=20\text{mA}$
$r_{DS(ON)}$	$V_{GS}=1.5\text{V}, I_D=10\text{mA}$
$r_{DS(ON)}$	$V_{GS}=1.2\text{V}, I_D=1.0\text{mA}$
g_{FS}	$V_{DS}=5.0\text{V}, I_D=125\text{mA}$
C_{rss}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{MHz}$
C_{iss}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{MHz}$
C_{oss}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{MHz}$
$Q_{g(tot)}$	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$
Q_{gs}	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$
Q_{gd}	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$
t_{on}	$V_{DD}=10\text{V}, V_{GS}=4.5\text{V}, I_D=200\text{mA}$
t_{off}	$V_{DD}=10\text{V}, V_{GS}=4.5\text{V}, I_D=200\text{mA}$

Central
Semiconductor Corp.

www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMRDM3575 consists of complementary N-Channel and P-Channel enhancement-mode silicon MOSFETs designed for high speed pulsed amplifier and driver applications. These MOSFETs offer low $r_{DS(ON)}$ and low threshold voltage.

MARKING CODE: CT

FEATURES:

- Power dissipation: 125mW
- Low package profile: 0.5mm (MAX)
- Low $r_{DS(ON)}$
- Low threshold voltage
- Logic level compatible
- Small SOT-963 surface mount package

SYMBOL	N-CH (Q1)	P-CH (Q2)	UNITS
V_{DS}		20	V
V_{GS}		8.0	V
I_D	160	140	mA
I_D	200	180	mA
P_D		125	mW
T_J, T_{stg}		-65 to +150	$^\circ\text{C}$
θ_{JA}		1000	$^\circ\text{C/W}$

N-CH (Q1)			P-CH (Q2)			UNITS
MIN	TYP	MAX	MIN	TYP	MAX	
-	-	100	-	-	100	nA
-	-	50	-	-	50	nA
-	-	100	-	-	100	nA
20	-	-	20	-	-	V
0.4	-	1.0	0.4	-	1.0	V
-	1.5	3.0	-	4.0	5.0	Ω
-	2.0	4.0	-	5.5	7.0	Ω
-	3.0	6.0	-	8.0	10	Ω
-	4.0	10	-	11	17	Ω
-	7.0	-	-	20	-	Ω
-	1.3	-	-	0.14	-	S
-	2.2	-	-	4.0	-	pF
-	9.0	-	-	10	-	pF
-	3.0	-	-	3.7	-	pF
-	0.458	-	-	0.50	-	nC
-	0.176	-	-	0.17	-	nC
-	0.138	-	-	0.11	-	nC
-	25	-	-	35	-	ns
-	85	-	-	100	-	ns

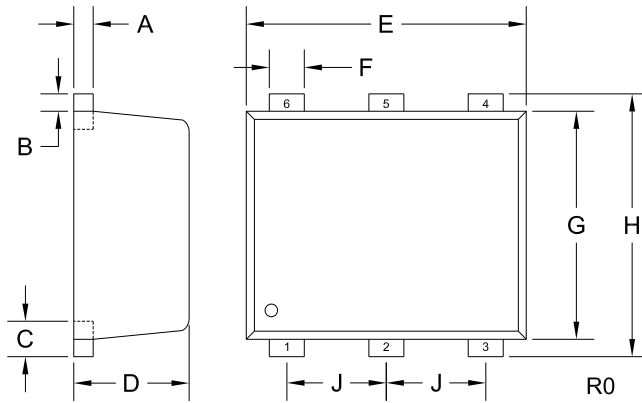
R3 (12-December 2012)

CMRDM3575

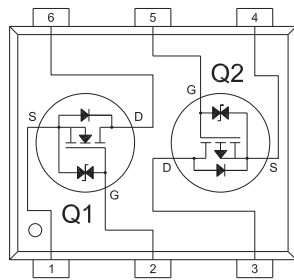
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SOT-963 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

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

MARKING CODE: CT

DIMENSIONS

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-963 (REV: R0)

R3 (12-December 2012)

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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