

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}	$V_{GS}=0, I_D=250\mu\text{A}$
$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$
$r_{DS(ON)}$	$V_{GS}=4.5\text{V}, I_D=100\text{mA}$
$r_{DS(ON)}$	$V_{GS}=2.5\text{V}, I_D=50\text{mA}$
$r_{DS(ON)}$	$V_{GS}=1.8\text{V}, I_D=20\text{mA}$
$r_{DS(ON)}$	$V_{GS}=1.5\text{V}, I_D=10\text{mA}$
$r_{DS(ON)}$	$V_{GS}=1.2\text{V}, I_D=1.0\text{mA}$
$Q_{g(tot)}$	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$
Q_{gs}	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$
Q_{gd}	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$
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}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{MHz}$
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
-	0.458	-	-	0.536	-	nC
-	0.176	-	-	0.292	-	nC
-	0.138	-	-	0.236	-	nC
-	1.3	-	-	1.3	-	S
-	2.2	-	-	1.0	-	pF
-	9.0	-	-	12	-	pF
-	3.0	-	-	2.7	-	pF
-	40	-	-	60	-	ns
-	150	-	-	210	-	ns

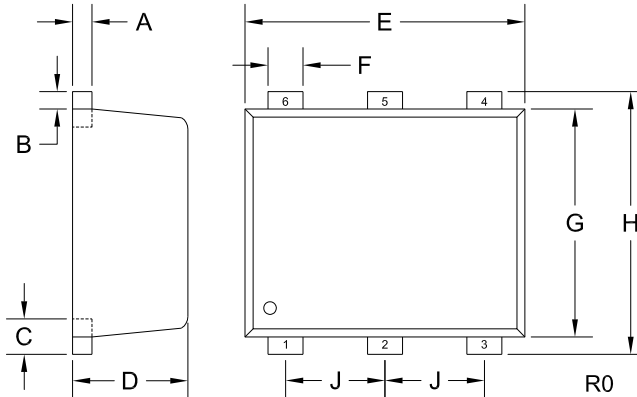
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CMRDM3575

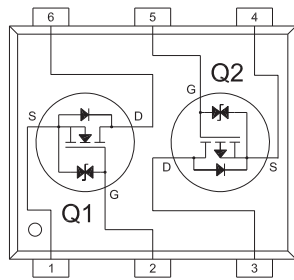
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SOT-963 CASE - MECHANICAL OUTLINE



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)

R2 (2-August 2011)