

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°C)

Drain-Source Voltage
Gate-Source Voltage
Continuous Drain Current (Steady State)
Continuous Drain Current, t _p ≤5.0s
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

ELECTRICAL CHARACTERISTICS: (T_A=25°C)

SYMBOL	TEST CONDITIONS
I _{GSSF} , I _{GSSR}	V _{GS} =5.0V, V _{DS} =0
I _{DSS}	V _{DS} =5.0V, V _{GS} =0
I _{DSS}	V _{DS} =16V, V _{GS} =0
BV _{DSS}	V _{GS} =0, I _D =250μA
V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA
r _{DS(ON)}	V _{GS} =4.5V, I _D =100mA
r _{DS(ON)}	V _{GS} =2.5V, I _D =50mA
r _{DS(ON)}	V _{GS} =1.8V, I _D =20mA
r _{DS(ON)}	V _{GS} =1.5V, I _D =10mA
r _{DS(ON)}	V _{GS} =1.2V, I _D =1.0mA
g _{FS}	V _{DS} =5.0V, I _D =125mA
C _{rss}	V _{DS} =15V, V _{GS} =0, f=1.0MHz
C _{iSS}	V _{DS} =15V, V _{GS} =0, f=1.0MHz
C _{oss}	V _{DS} =15V, V _{GS} =0, f=1.0MHz
Q _{g(tot)}	V _{DS} =10V, V _{GS} =4.5V, I _D =100mA
Q _{gs}	V _{DS} =10V, V _{GS} =4.5V, I _D =100mA
Q _{gd}	V _{DS} =10V, V _{GS} =4.5V, I _D =100mA
t _{on}	V _{DD} =10V, V _{GS} =4.5V, I _D =200mA
t _{off}	V _{DD} =10V, V _{GS} =4.5V, I _D =200mA



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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		°C
θ _{JA}	1000		°C/W

	N-CH (Q1)			P-CH (Q2)			UNITS
	MIN	TYP	MAX	MIN	TYP	MAX	
I _{GSSF} , I _{GSSR}	-	-	100	-	-	100	nA
I _{DSS}	-	-	50	-	-	50	nA
I _{DSS}	-	-	100	-	-	100	nA
BV _{DSS}	20	-	-	20	-	-	V
V _{GS(th)}	0.4	-	1.0	0.4	-	1.0	V
r _{DS(ON)}	-	1.5	3.0	-	4.0	5.0	Ω
r _{DS(ON)}	-	2.0	4.0	-	5.5	7.0	Ω
r _{DS(ON)}	-	3.0	6.0	-	8.0	10	Ω
r _{DS(ON)}	-	4.0	10	-	11	17	Ω
r _{DS(ON)}	-	7.0	-	-	20	-	Ω
g _{FS}	-	1.3	-	-	0.14	-	S
C _{rss}	-	2.2	-	-	4.0	-	pF
C _{iSS}	-	9.0	-	-	10	-	pF
C _{oss}	-	3.0	-	-	3.7	-	pF
Q _{g(tot)}	-	0.458	-	-	0.50	-	nC
Q _{gs}	-	0.176	-	-	0.17	-	nC
Q _{gd}	-	0.138	-	-	0.11	-	nC
t _{on}	-	25	-	-	35	-	ns
t _{off}	-	85	-	-	100	-	ns

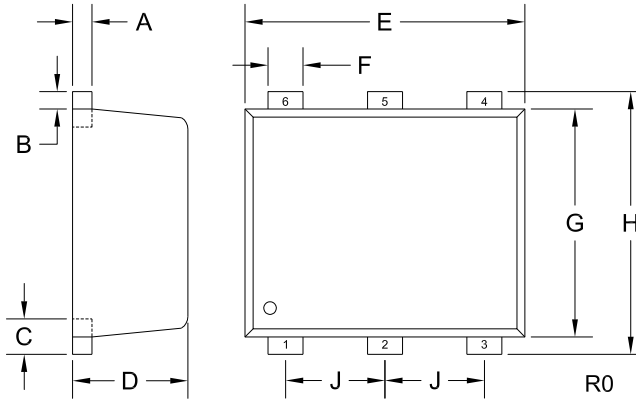
R3 (12-December 2012)

CMRDM3575

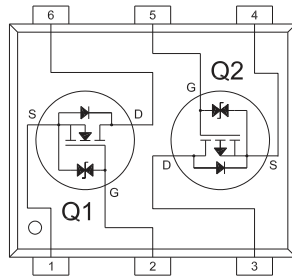
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SOT-963 CASE - MECHANICAL OUTLINE



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

SYMBOL	DIMENSIONS			
	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)

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

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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