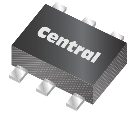
CMLDM5757

SURFACE MOUNT SILICON DUAL P-CHANNEL ENHANCEMENT-MODE MOSFET



SOT-563 CASE

APPLICATIONS:

- Load switch/Level shifting
- Battery charging
- Boost switch
- Electro-luminescent backlighting

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DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMLDM5757 consists of dual silicon P-Channel enhancement-mode MOSFETs designed for high speed pulsed amplifier and driver applications. These MOSFETs offer very low $r_{DS(ON)}$ and low threshold voltage.

MARKING CODE: 77C

FEATURES:

- ESD protection up to 1800V (Human Body Model)
- 350mW power dissipation
- Very low $r_{DS(ON)}$
- Low threshold voltage
- Logic level compatible
- Small, SOT-563 surface mount package
- Complementary dual N-Channel device: CMLDM3737

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	8.0	V
Continuous Drain Current (Steady State)	I_D	430	mA
Maximum Pulsed Drain Current (tp=10μs)	I_{DM}	750	mA
Power Dissipation (Note 1)	P_D	350	mW
Power Dissipation (Note 2)	P_D	300	mW
Power Dissipation (Note 3)	P_D	150	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance (Note 1)	Θ_{JA}	357	°C/W

ELECTRICAL CHARACTERISTICS PER TRANSISTOR: (T_A=25°C)

SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**UNITS**
I_{GSSF}, I_{GSSR}	V_{GS}=4.5V, V_{DS}=0		2.0	μA
I_{DSS}	V_{DS}=16V, V_{GS}=0		1.0	μA
BV_{DSS}	V_{GS}=0, I_D=250μA	20		V
$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	0.45	1.0	V
V_{SD}	V_{GS}=0, I_S=350mA		1.2	V
$r_{DS(ON)}$	V_{GS}=4.5V, I_D=430mA		0.9	Ω
$r_{DS(ON)}$	V_{GS}=2.5V, I_D=300mA		1.2	Ω
$r_{DS(ON)}$	V_{GS}=1.8V, I_D=150mA		2.0	Ω
C_{rss}	V_{DS}=16V, V_{GS}=0, f=1.0MHz		20	pF
C_{iss}	V_{DS}=16V, V_{GS}=0, f=1.0MHz		175	pF
C_{oss}	V_{DS}=16V, V_{GS}=0, f=1.0MHz		30	pF

Notes: (1) Ceramic or aluminum core PC Board with copper mounting pad area of 4.0mm^2
(2) FR-4 Epoxy PC Board with copper mounting pad area of 4.0mm^2
(3) FR-4 Epoxy PC Board with copper mounting pad area of 1.4mm^2

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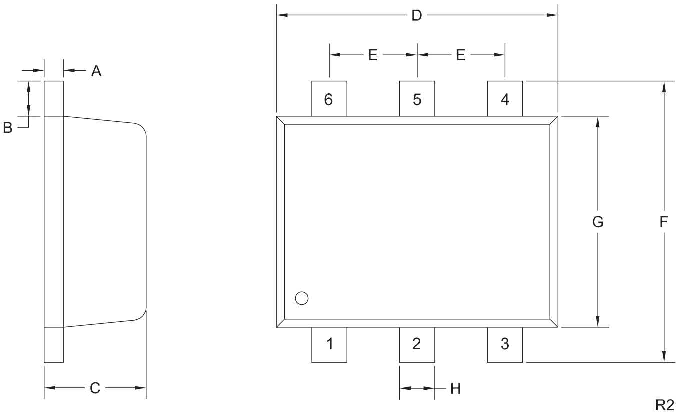
DUAL P-CHANNEL
ENHANCEMENT-MODE
MOSFET**

ELECTRICAL CHARACTERISTICS PER TRANSISTOR - Continued: (T_A=25°C)

SYMBOL	TEST CONDITIONS	TYP	NITS
$Q_{g(tot)}$	V_{DS}=10V, V_{GS}=4.5V, I_D=200mA	1.2	nC
Q_{gs}	V_{DS}=10V, V_{GS}=4.5V, I_D=200mA	0.24	nC
Q_{gd}	V_{DS}=10V, V_{GS}=4.5V, I_D=200mA	0.36	nC
t_{on}	V_{DD}=10V, V_{GS}=4.5V, I_D=215mA, R_G=10Ω	38	ns
t_{off}	V_{DD}=10V, V_{GS}=4.5V, I_D=215mA, R_G=10Ω	48	ns

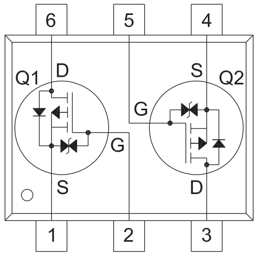
SOT-563 CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.0027	0.007	0.07	0.18
B	0.008		0.20	
C	0.017	0.024	0.45	0.60
D	0.059	0.067	1.50	1.70
E	0.020		0.50	
F	0.059	0.067	1.50	1.70
G	0.043	0.051	1.10	1.30
H	0.006	0.012	0.15	0.30

SOT-563 (REV: R2)

PIN CONFIGURATION



LEAD CODE:
1) Source Q1
2) Gate Q1
3) Drain Q2
4) Source Q2
5) Gate Q2
6) Drain Q1

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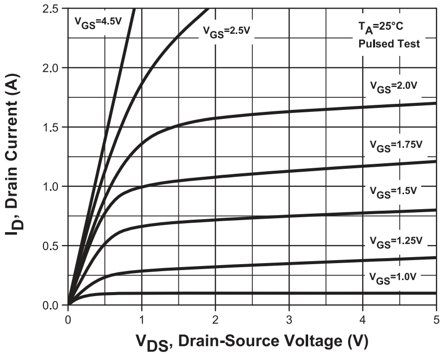
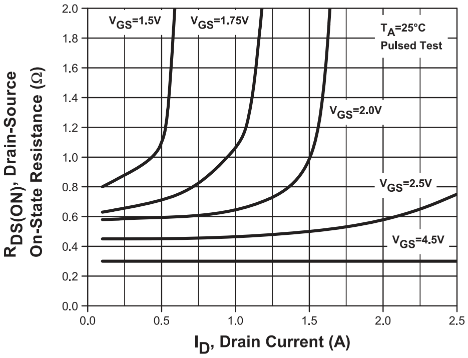
TYPICAL ELECTRICAL CHARACTERISTICS

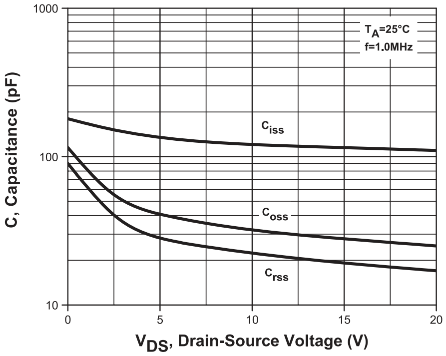
Output Characteristics



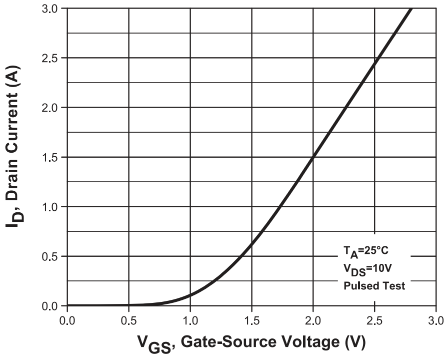
Drain Source On Resistance



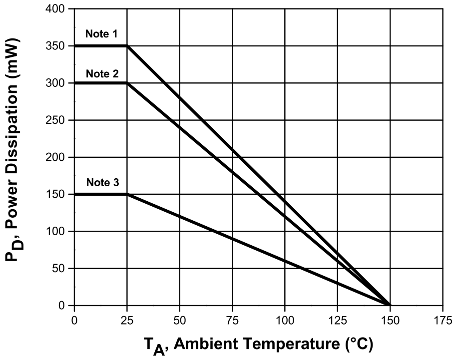
Capacitance



Transfer Characteristics



Power Derating



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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).

CONTACT US

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