CMLDM7120G

SURFACE MOUNT SILICON N-CHANNEL ENHANCEMENT-MODE MOSFET



SOT-563 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMLDM7120G is an enhancement-mode N-Channel MOSFET, manufactured by the N-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: C7G

• Device is ***Halogen Free*** by design

APPLICATIONS:

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

FEATURES:

- ESD protection up to 2kV
- Low $r_{DS(ON)}$ (0.25Ω MAX @ V_{GS}=1.5V)
- High current (I_D=1.0A)
- Logic level compatibility

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	1.0	A
Maximum Pulsed Drain Current, tp=10μs	I_{DM}	4.0	A
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	Θ_{JA}	357	°C/W

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

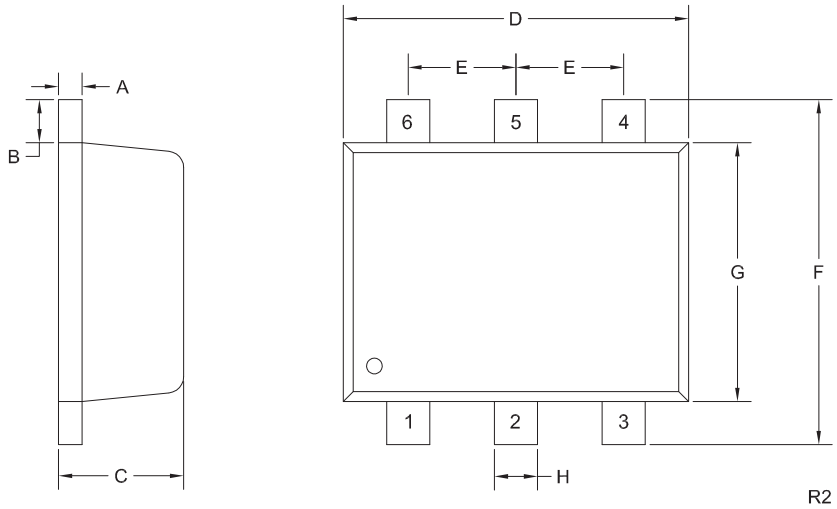
SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{GSSF}, I_{GSSR}	V_{GS}=8.0V, V_{DS}=0			10	μA
I_{DSS}	V_{DS}=20V, V_{GS}=0			10	μA
BV_{DSS}	V_{GS}=0, I_D=250μA	20			V
$V_{GS(th)}$	V_{DS}=10V, I_D=1.0mA	0.5		1.2	V
V_{SD}	V_{GS}=0, I_S=1.0A			1.1	V
$r_{DS(ON)}$	V_{GS}=4.5V, I_D=0.5A		0.075	0.10	Ω
$r_{DS(ON)}$	V_{GS}=2.5V, I_D=0.5A		0.10	0.14	Ω
$r_{DS(ON)}$	V_{GS}=1.5V, I_D=0.1A		0.20	0.25	Ω
g_{FS}	V_{DS}=10V, I_D=0.5A		2.5		S
C_{rss}	V_{DS}=10V, V_{GS}=0, f=1.0MHz		45		pF
C_{iss}	V_{DS}=10V, V_{GS}=0, f=1.0MHz		220		pF
C_{oss}	V_{DS}=10V, V_{GS}=0, f=1.0MHz		120		pF
$Q_{g(tot)}$	V_{DS}=10V, V_{GS}=4.5V, I_D=1.0A		2.4		nC
Q_{gs}	V_{DS}=10V, V_{GS}=4.5V, I_D=1.0A		0.25		nC
Q_{gd}	V_{DS}=10V, V_{GS}=4.5V, I_D=1.0A		0.65		nC
t_{on}	V_{DD}=10V, V_{GS}=5.0V, I_D=0.5A		25		ns
t_{off}	V_{DD}=10V, V_{GS}=5.0V, I_D=0.5A		140		ns

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

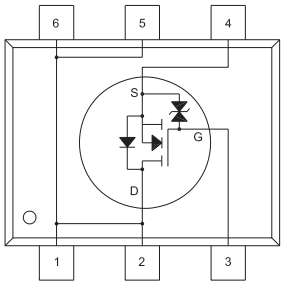
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SOT-563 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



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

MARKING CODE: C7G

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)

R6 (8-June 2015)

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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Üretici parça numarasını yazın; stok ve fiyatı hemen görün.

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Entegreden kapasitöre tüm elektronik komponent kategorileri.

Kategorilere göz atın

Üreticiler

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Üreticileri görün

Toplu alım ve teklif

Listede olmayan ya da yüksek adetli parçalar için teklif isteyin.

Teklif isteyin

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Entegreci is an online electronic components store based in Türkiye. Search by manufacturer part number to see stock, prices and datasheets for integrated circuits, microcontrollers, transistors, passive components and connectors, or request a quote for parts that are not listed.

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