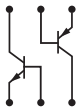
CMLT2207G

SURFACE MOUNT SILICON DUAL, COMPLEMENTARY TRANSISTOR





SOT-563 CASE

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

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMLT2207G consists of one isolated 2N2222A NPN transistor and one complementary isolated 2N2907A PNP transistor, manufactured by the epitaxial planar process and epoxy molded in an SOT-563 surface mount package. This device has been designed for small signal general purpose amplifier and switching applications.

MARKING CODE: L7G

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**	**NPN (Q1)**	**PNP (Q2)**	**UNITS**
Collector-Base Voltage	V_{CBO}	75	60	V
Collector-Emitter Voltage	V_{CEO}	40	60	V
Emitter-Base Voltage	V_{EBO}	6.0	5.0	V
Continuous Collector Current	I_C	600		mA
Power Dissipation	P_D	350		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)

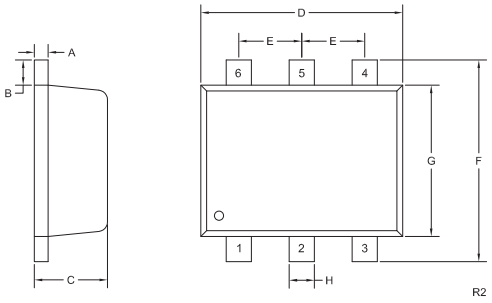
		NPN (Q1)		**PNP (Q2)**		
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**MIN**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=60V	-	10	-	-	nA
I_{CBO}	V_{CB}=50V	-	-	-	10	nA
I_{CBO}	V_{CB}=60V, T_A=125°C	-	10	-	-	nA
I_{CBO}	V_{CB}=50V, T_A=125°C	-	-	-	10	nA
I_{CEV}	V_{CE}=60V, $V_{EB(OFF)}$=3.0V	-	10	-	-	nA
I_{CEV}	V_{CE}=30V, $V_{EB(OFF)}$=500mV	-	-	-	50	nA
I_{EBO}	V_{EB}=3.0V	-	10	-	-	nA
BV_{CBO}	I_C=10μA	75	-	60	-	V
BV_{CEO}	I_C=10mA	40	-	60	-	V
BV_{EBO}	I_E=10μA	6.0	-	5.0	-	V
$V_{CE(SAT)}$	I_C=150mA, I_B=15mA	-	0.3	-	0.4	V
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA	-	1.0	-	1.6	V
$V_{BE(SAT)}$	I_C=150mA, I_B=15mA	0.6	1.2	-	1.3	V
$V_{BE(SAT)}$	I_C=500mA, I_B=50mA	-	2.0	-	2.6	V
h_{FE}	V_{CE}=10V, I_C=0.1mA	35	-	75	-	
h_{FE}	V_{CE}=10V, I_C=1.0mA	50	-	100	-	
h_{FE}	V_{CE}=10V, I_C=10mA	75	-	100	-	
h_{FE}	V_{CE}=10V, I_C=150mA	100	300	100	300	
h_{FE}	V_{CE}=1.0V, I_C=150mA	50	-	-	-	
h_{FE}	V_{CE}=10V, I_C=500mA	40	-	50	-	

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SURFACE MOUNT SILICON DUAL, COMPLEMENTARY TRANSISTOR

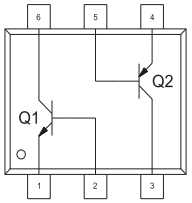
ELECTRICAL CHARACTERISTICS - Continued:		NPN (Q1)		PNP (Q2)		
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**MIN**	**MAX**	**UNITS**
f_T	V_{CE}=20V, I_C=20mA, f=100MHz	300	-	-	-	MHz
f_T	V_{CE}=20V, I_C=50mA, f=100MHz	-	-	200	-	MHz
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz	-	8.0	-	8.0	pF
C_{ib}	V_{EB}=0.5V, I_C=0, f=1.0MHz	-	25	-	-	pF
C_{ib}	V_{EB}=2.0V, I_C=0, f=1.0MHz	-	-	-	30	pF
h_{ie}	V_{CE}=10V, I_C=1.0mA, f=1.0kHz	2.0	8.0	-	-	kΩ
h_{ie}	V_{CE}=10V, I_C=10mA, f=1.0kHz	0.25	1.25	-	-	kΩ
h_{re}	V_{CE}=10V, I_C=1.0mA, f=1.0kHz	-	8.0	-	-	x10-4
h_{re}	V_{CE}=10V, I_C=10mA, f=1.0kHz	-	4.0	-	-	x10-4
h_{fe}	V_{CE}=10V, I_C=1.0mA, f=1.0kHz	50	300	-	-	
h_{fe}	V_{CE}=10V, I_C=10mA, f=1.0kHz	75	375	-	-	
h_{oe}	V_{CE}=10V, I_C=1.0mA, f=1.0kHz	5.0	35	-	-	μS
h_{oe}	V_{CE}=10V, I_C=10mA, f=1.0kHz	25	200	-	-	μS
$rb'C_c$	V_{CB}=10V, I_E=20mA, f=31.8MHz	-	150	-	-	ps
NF	V_{CE}=10V, I_C=100μA, R_S=1.0kΩ, f=1.0kHz	-	4.0	-	-	dB
t_{on}	V_{CC}=30V, V_{BE}=0.5V, I_C=150mA, I_{B1}=15mA	-	-	-	45	ns
t_d	V_{CC}=30V, V_{BE}=0.5V, I_C=150mA, I_{B1}=15mA	-	10	-	10	ns
t_r	V_{CC}=30V, V_{BE}=0.5V, I_C=150mA, I_{B1}=15mA	-	25	-	40	ns
t_{off}	V_{CC}=6.0V, I_C=150mA, I_{B1}=I_{B2}=15mA	-	-	-	100	ns
t_s	V_{CC}=30V, I_C=150mA, I_{B1}=I_{B2}=15mA	-	225	-	-	ns
t_s	V_{CC}=6.0V, I_C=150mA, I_{B1}=I_{B2}=15mA	-	-	-	80	ns
t_f	V_{CC}=30V, I_C=150mA, I_{B1}=I_{B2}=15mA	-	60	-	-	ns
t_f	V_{CC}=6.0V, I_C=150mA, I_{B1}=I_{B2}=15mA	-	-	-	30	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)



LEAD CODE:
1) Emitter Q1
2) Base Q1
3) Collector Q2
4) Emitter Q2
5) Base Q2
6) Collector Q1

MARKING CODE: L7G

R5 (29-June 2015)

CMLT2207G

SURFACE MOUNT SILICON DUAL, COMPLEMENTARY TRANSISTOR

SERVICES

- Bonded Inventory
- Custom Electrical Screening
- Custom Electrical Characteristic Curves
- SPICE Models
- Custom Packaging
- Package Base Options
- Custom Device Development / Multi Discrete Modules (MDM™)
- Bare Die Available for Hybrid Applications

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R5 (29-June 2015)