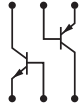


CMLT5554

**SURFACE MOUNT
DUAL, COMPLEMENTARY
HIGH VOLTAGE
SILICON TRANSISTORS**

PICOmini™



SOT-563 CASE



www.centraalsemi.com

The CENTRAL SEMICONDUCTOR CMLT5554 consists of one 2N5551 NPN silicon transistor and one individual isolated complementary 2N5401 PNP silicon transistor, manufactured by the epitaxial planar process and epoxy molded in an SOT-563 surface mount package. This PICOmini™ device has been designed for high voltage amplifier applications.

MARKING CODE: 5C4

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL	NPN (Q1)	PNP (Q2)	UNITS
V_{CBO}	180	160	V
V_{CEO}	160	150	V
V_{EBO}	6.0	5.0	V
I_C	600		mA
P_D	350		mW
T_J, T_{stg}	-65 to +150		$^\circ\text{C}$
θ_{JA}	357		$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS PER TRANSISTOR: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	NPN (Q1)		PNP (Q2)		UNITS
		MIN	MAX	MIN	MAX	
I_{CBO}	$V_{CB}=120\text{V}$	-	50	-	-	nA
I_{CBO}	$V_{CB}=100\text{V}$	-	-	-	50	nA
I_{CBO}	$V_{CB}=120\text{V}, T_A=100^\circ\text{C}$	-	50	-	-	μA
I_{CBO}	$V_{CB}=100\text{V}, T_A=150^\circ\text{C}$	-	-	-	50	μA
BV_{CBO}	$I_C=100\mu\text{A}$	180	-	160	-	V
BV_{CEO}	$I_C=1.0\text{mA}$	160	-	150	-	V
BV_{EBO}	$I_E=10\mu\text{A}$	6.0	-	5.0	-	V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$	-	0.15	-	0.2	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$	-	0.2	-	0.5	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$	-	1.0	-	1.0	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$	-	1.0	-	1.0	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	80	-	50	-	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	80	250	60	240	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=50\text{mA}$	30	-	50	-	
f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100	300	100	300	MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$	-	6.0	-	6.0	pF
h_{fe}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	50	200	40	200	
NF	$V_{CE}=5.0\text{V}, I_C=200\mu\text{A}, R_S=10\Omega, f=10\text{Hz to } 15.7\text{kHz}$	-	8.0	-	8.0	dB

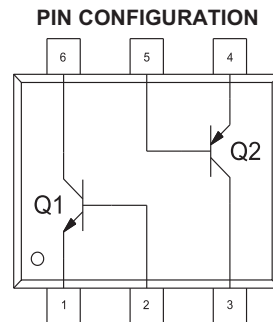
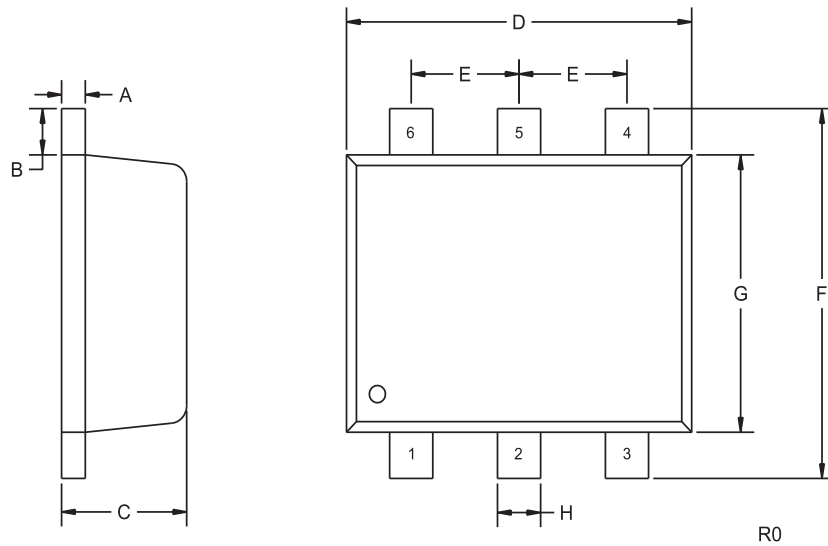
R1 (20-January 2010)

CMLT5554

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SOT-563 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Emitter Q1
- 2) Base Q1
- 3) Collector Q2
- 4) Emitter Q2
- 5) Base Q2
- 6) Collector Q1

MARKING CODE: 5C4

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.004	0.007	0.10	0.18
B	0.008		0.20	
C	0.022	0.024	0.56	0.60
D	0.059	0.067	1.50	1.70
E	0.020		0.50	
F	0.061	0.067	1.55	1.70
G	0.047		1.20	
H	0.006	0.012	0.15	0.30

SOT-563 (REV: R0)

R1 (20-January 2010)