

CMLT5554

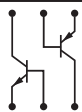
**SURFACE MOUNT
DUAL, COMPLEMENTARY
HIGH VOLTAGE
SILICON TRANSISTORS**



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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.

PICOmini™



SOT-563 CASE

MARKING CODE: 5C4

MAXIMUM RATINGS: (T_A=25°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	°C
θ _{JA}		357	°C/W

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

SYMBOL	TEST CONDITIONS	NPN (Q1)		PNP (Q2)		UNITS
		MIN	MAX	MIN	MAX	
I _{CBO}	V _{CB} =120V	-	50	-	-	nA
I _{CBO}	V _{CB} =100V	-	-	-	50	nA
I _{CBO}	V _{CB} =120V, T _A =100°C	-	50	-	-	μA
I _{CBO}	V _{CB} =100V, T _A =150°C	-	-	-	50	μA
BV _{CBO}	I _C =100μA	180	-	160	-	V
BV _{CEO}	I _C =1.0mA	160	-	150	-	V
BV _{EBO}	I _E =10μA	6.0	-	5.0	-	V
V _{CE(SAT)}	I _C =10mA, I _B =1.0mA	-	0.15	-	0.2	V
V _{CE(SAT)}	I _C =50mA, I _B =5.0mA	-	0.2	-	0.5	V
V _{BE(SAT)}	I _C =10mA, I _B =1.0mA	-	1.0	-	1.0	V
V _{BE(SAT)}	I _C =50mA, I _B =5.0mA	-	1.0	-	1.0	V
h _{FE}	V _{CE} =5.0V, I _C =1.0mA	80	-	50	-	
h _{FE}	V _{CE} =5.0V, I _C =10mA	80	250	60	240	
h _{FE}	V _{CE} =5.0V, I _C =50mA	30	-	50	-	
f _T	V _{CE} =10V, I _C =10mA, f=100MHz	100	300	100	300	MHz
C _{ob}	V _{CB} =10V, I _E =0, f=1.0MHz	-	6.0	-	6.0	pF
h _{fe}	V _{CE} =10V, I _C =1.0mA, f=1.0kHz	50	200	40	200	
NF	V _{CE} =5.0V, I _C =200μA, R _S =10Ω, f=10Hz to 15.7kHz	-	8.0	-	8.0	dB

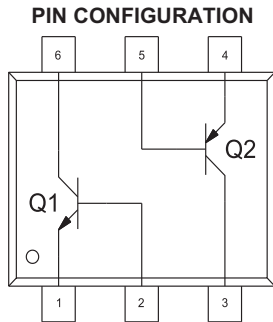
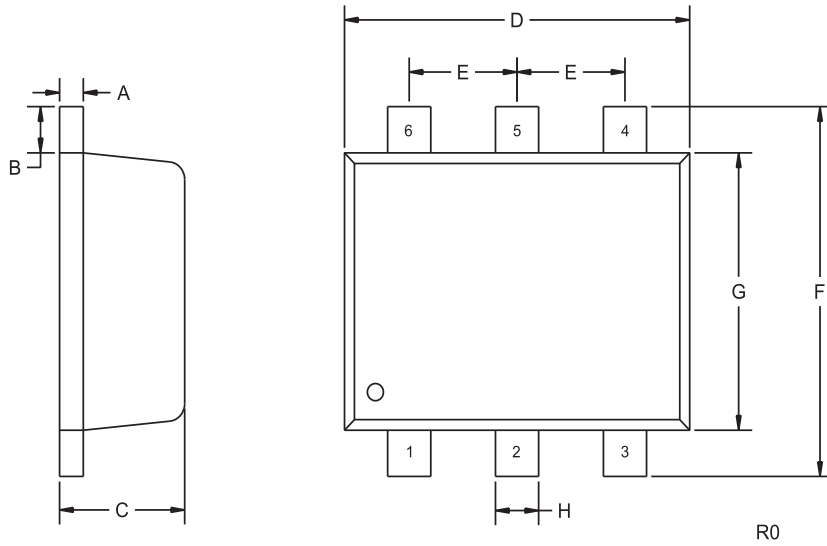
R1 (20-January 2010)

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SOT-563 CASE - MECHANICAL OUTLINE



SYMBOL	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)

LEAD CODE:

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

MARKING CODE: 5C4

R1 (20-January 2010)