

**CMLT5551HC**  
**SURFACE MOUNT**  
**HIGH CURRENT**  
**SILICON NPN TRANSISTOR**



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**PICOmini™**



**SOT-563 CASE**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMLT5551HC type is a high current NPN 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 and high current amplifier applications.

**MARKING CODE: C51**

**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**

$V_{CBO}$	180
$V_{CEO}$	160
$V_{EBO}$	6.0
$I_C$	1.0
$P_D$	350
$T_J, T_{stg}$	-65 to +150
$\theta_{JA}$	357

**UNITS**

V
V
V
A
mW
$^\circ\text{C}$
$^\circ\text{C/W}$

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

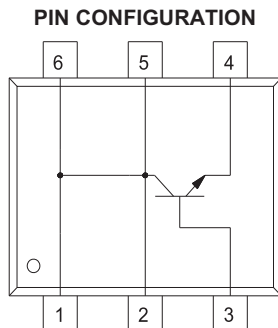
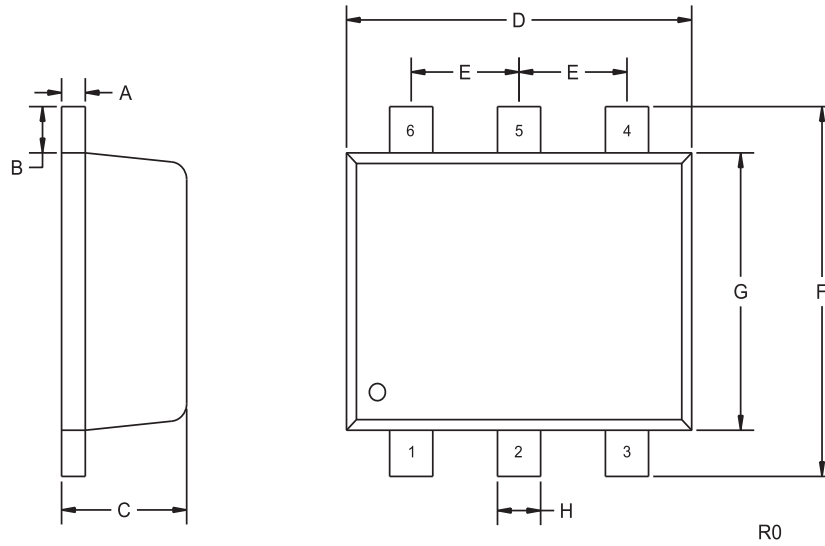
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{CBO}$	$V_{CB}=120\text{V}$			50	nA
$I_{CBO}$	$V_{CB}=120\text{V}, T_A=100^\circ\text{C}$			50	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=4.0\text{V}$			50	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$	180			V
$BV_{CEO}$	$I_C=1.0\text{mA}$	160			V
$BV_{EBO}$	$I_E=10\mu\text{A}$	6.0			V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$			0.15	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$			0.20	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$			1.00	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$			1.00	V
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	80			
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	80		250	
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=50\text{mA}$	30			
$h_{FE}$	$V_{CE}=10\text{V}, I_C=1.0\text{A}$		10		
$f_T$	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100			MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$			15	pF

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) Collector
- 2) Collector
- 3) Base
- 4) Emitter
- 5) Collector
- 6) Collector

**MARKING CODE: C51**

R1 (20-January 2010)