

CMLT591E

SURFACE MOUNT SILICON
PNP TRANSISTOR



SOT-563 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMLT591E is a PNP Low $V_{CE(SAT)}$ 1.0 Amp transistor, epoxy molded in a space saving SOT-563 surface mount package and designed for applications requiring a high current capability and low saturation voltages.

MARKING CODE: L59

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

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

SYMBOL		UNITS
V_{CBO}	80	V
V_{CEO}	60	V
V_{EBO}	5.0	V
I_C	1.0	A
I_{CM}	2.0	A
I_B	200	mA
P_D	250	mW
T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
Θ_{JA}	500	$^\circ\text{C/W}$

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

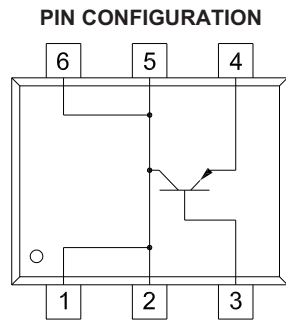
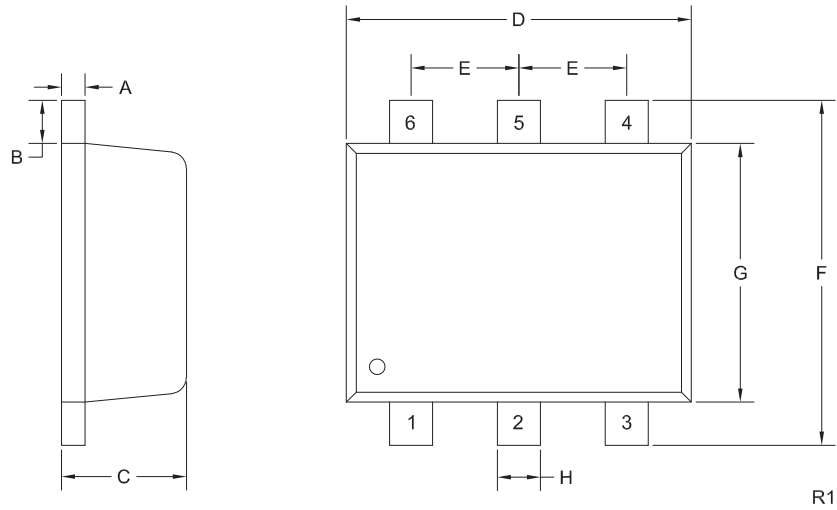
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=60\text{V}$		100	nA
I_{EBO}	$V_{EB}=4.0\text{V}$		100	nA
BV_{CBO}	$I_C=100\mu\text{A}$	80		V
BV_{CEO}	$I_C=10\text{mA}$	60		V
BV_{EBO}	$I_E=100\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.20	V
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=100\text{mA}$		0.40	V
$V_{BE(SAT)}$	$I_C=1.0\text{A}, I_B=100\text{mA}$		1.1	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=1.0\text{A}$		1.0	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	200		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=500\text{mA}$	200	600	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{A}$	50		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=2.0\text{A}$	15		
f_T	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=100\text{MHz}$	150		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		10	pF

R4 (12-February 2014)

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SOT-563 CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	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	0.061	0.067	1.55	1.70
G	0.045	0.049	1.15	1.25
H	0.006	0.012	0.15	0.30

SOT-563 (REV: R1)

LEAD CODE:

- 1) Collector
 - 2) Collector
 - 3) Base
 - 4) Emitter
 - 5) Collector
 - 6) Collector
- Pins 1, 2, 5 and 6 are common.

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