

**CMPT7090L**  
**SURFACE MOUNT**  
**LOW  $V_{CE(SAT)}$**   
**PNP POWER TRANSISTOR**

**POWER**  
**23**



**SOT-23F CASE**

**Central**<sup>TM</sup>  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPT7090L is a Low  $V_{CE(SAT)}$  PNP Transistor in a space saving Power SOT-23F surface mount package, designed for DC-DC converters for mobile systems and LAN cards, motor control, power management and strobe flash units.

Marking code is **709L**.

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

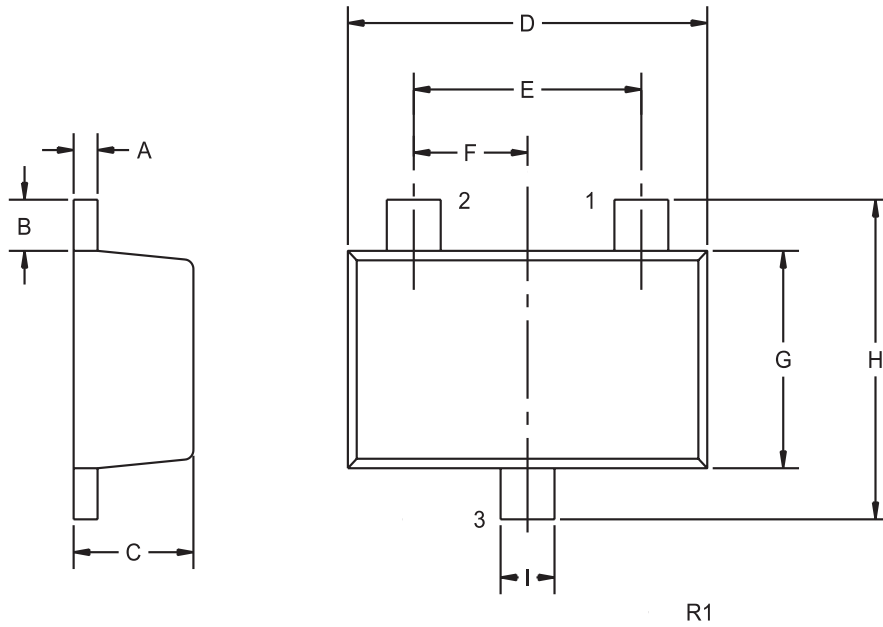
	SYMBOL		UNITS
Collector-Base Voltage	$V_{CBO}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	40	V
Emitter-Base Voltage	$V_{EBO}$	5.0	V
Continuous Collector Current	$I_C$	3.0	A
Peak Pulse Current	$I_{CM}$	6.0	A
Power Dissipation	$P_D$	350	mW
Operating and Storage			
Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	357	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{CBO}$	$V_{CB}=30\text{V}$			100	nA
$I_{CBO}$	$V_{CB}=30\text{V}, T_A=100^\circ\text{C}$			10	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=4.0\text{V}$			100	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$	50			V
$BV_{CEO}$	$I_C=10\text{mA}$	40			V
$BV_{EBO}$	$I_E=100\mu\text{A}$	5.0			V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=5.0\text{mA}$		100	250	mV
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=10\text{mA}$		175	450	mV
$V_{CE(SAT)}$	$I_C=2.0\text{A}, I_B=50\text{mA}$		250	750	mV
$V_{BE(SAT)}$	$I_C=1.0\text{A}, I_B=10\text{mA}$		0.8	1.0	V
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=10\text{mA}$	300		800	
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$	250			
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=1.0\text{A}$	200			
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=2.0\text{A}$	150			
$f_T$	$V_{CE}=5\text{V}, I_C=50\text{mA}, f=50\text{MHz}$	100			MHz

R0 ( 13-December 2001)

**SOT-23F CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) Base
- 2) Emitter
- 3) Collector

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.004	0.008	0.10	0.20
B	0.012	0.020	0.30	0.50
C	0.031	0.039	0.80	1.00
D	0.110	0.118	2.80	3.00
E	0.075		1.90	
F	0.037		0.95	
G	0.059	0.067	1.50	1.70
H	0.091	0.098	2.30	2.50
I	0.014	0.018	0.35	0.45

SOT-23F (REV: R1)