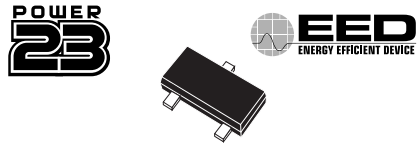
CMPT3090L

SURFACE MOUNT
LOW $V_{CE(SAT)}$
NPN POWER TRANSISTOR



SOT-23F CASE

Central™
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPT3090L is a Low $V_{CE(SAT)}$ NPN 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 309L.

MAXIMUM RATINGS: (T_A=25°C)

	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	45	V
Collector-Emitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Continuous Collector Current	I_C	5.0	A
Peak Pulse Current	I_{CM}	10	A
Power Dissipation	P_D	350	mW
Operating and Storage Junction Temperature	T_J,T_{stg}	-65 to +150	°C
Thermal Resistance	Θ_{JA}	357	°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CBO}	V_{CB}=20V			100	nA
I_{EBO}	V_{EB}=5.0V			100	nA
BV_{CBO}	I_C=10μA	45			V
BV_{CEO}	I_C=10mA	15			V
BV_{EBO}	I_E=10μA	6.0			V
$V_{CE(SAT)}$	I_C=100mA, I_B=1.0mA		30	50	mV
$V_{CE(SAT)}$	I_C=1.0A, I_B=20mA		60	150	mV
$V_{CE(SAT)}$	I_C=2.0A, I_B=200mA		85	200	mV
$V_{CE(SAT)}$	I_C=3.0A, I_B=60mA		145	300	mV
h_{FE}	V_{CE}=2.0V, I_C=500mA	200			
h_{FE}	V_{CE}=2.0V, I_C=1.0A	200			
h_{FE}	V_{CE}=2.0V, I_C=3.0A	175			
h_{FE}	V_{CE}=2.0V, I_C=5.0A	150			
C_{ob}	V_{CB}=10V, f=1.0MHz			100	pF
f_T	V_{CE}=10V, I_C=500mA	100			MHz

R0 (13-December 2001)

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CMPT3090L

SURFACE MOUNT
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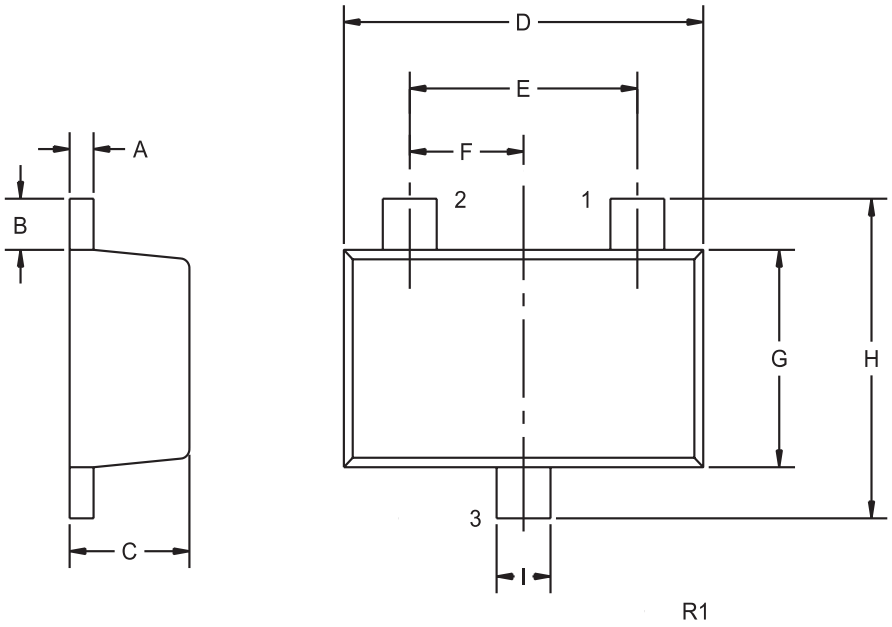
NPN POWER TRANSISTOR

SOT-23F CASE - MECHANICAL OUTLINE



LEAD CODE:
1) Base
2) Emitter
3) Collector

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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)

R0 (13-December 2001)

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