

PRELIMINARY

CXT953

**SURFACE MOUNT
HIGH CURRENT
SILICON PNP TRANSISTOR**

**SOT-89 CASE**

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CXT953 type is a high current, high voltage silicon PNP transistor. Packaged in the SOT-89 surface mount case, the CXT953 is ideal for industrial and consumer applications requiring high energy efficiency in a small package.

MARKING CODE: FULL PART NUMBER**NPN complement: CXT853****FEATURES:**

- Low Saturation Voltage:
 $V_{CE(SAT)} = 0.420V \text{ Max @ } I_C = 4.0A$

APPLICATIONS:

- Power Management
- DC/DC Converters
- Motor Driving
- Switching

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

	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	140	V
Collector-Emitter Voltage	V_{CEO}	100	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Collector Current	I_C	5.0	A
Power Dissipation	P_D	1.2	W
Operating and Storage			
Junction Temperature	T_J, T_{stg}	-65 to +150	$^\circ C$
Thermal Resistance	θ_{JA}	104	$^\circ C/W$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CBO}	$V_{CB} = 100V$			50	nA
I_{CBO}	$V_{CB} = 100V, T_A = 100^\circ C$			1.0	μA
I_{CER}	$V_{CE} = 100V, R_{BE} \leq 1k\Omega$			50	nA
I_{EBO}	$V_{EB} = 6.0V$			10	nA
BV_{CBO}	$I_C = 100\mu A$	140	170		V
BV_{CER}	$I_C = 10mA, R_{BE} \leq 1k\Omega$	140	150		V
BV_{CEO}	$I_C = 10mA$	100	120		V
BV_{EBO}	$I_E = 100\mu A$	6.0	9.0		V
$V_{CE(SAT)}$	$I_C = 100mA, I_B = 10mA$		20	50	mV
$V_{CE(SAT)}$	$I_C = 1.0A, I_B = 100mA$		90	120	mV
$V_{CE(SAT)}$	$I_C = 2.0A, I_B = 200mA$		170	220	mV
$V_{CE(SAT)}$	$I_C = 4.0A, I_B = 400mA$		320	420	mV
$V_{BE(SAT)}$	$I_C = 4.0A, I_B = 400mA$		1.0	1.2	V

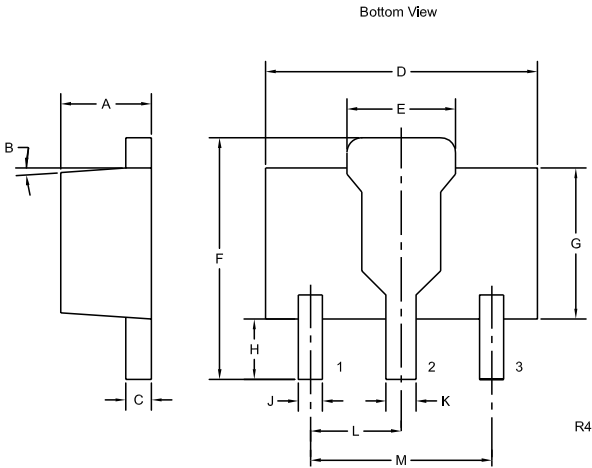
R0 (1-February 2006)

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
h_{FE}	$V_{CE}=1.0\text{V}, I_C=10\text{mA}$	100			
h_{FE}	$V_{CE}=1.0\text{V}, I_C=1.0\text{A}$	100	200	300	
h_{FE}	$V_{CE}=1.0\text{V}, I_C=3.0\text{A}$	50	70		
h_{FE}	$V_{CE}=1.0\text{V}, I_C=4.0\text{A}$	30	45		
h_{FE}	$V_{CE}=1.0\text{V}, I_C=10\text{A}$		15		
f_T	$V_{CE}=10\text{V}, I_C=100\text{mA}, f=50\text{MHz}$		150		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		45		pF

SOT-89 CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.055	0.067	1.40	1.70
B	4°		4°	
C	0.014	0.018	0.35	0.46
D	0.173	0.185	4.40	4.70
E	0.064	0.074	1.62	1.87
F	0.146	0.177	3.70	4.50
G	0.090	0.106	2.29	2.70
H	0.028	0.051	0.70	1.30
J	0.014	0.019	0.36	0.48
K	0.017	0.023	0.44	0.58
L	0.059		1.50	
M	0.118		3.00	

SOT-89 (REV: R4)

LEAD CODE:

- 1) EMITTER
- 2) COLLECTOR
- 3) BASE

MARKING CODE:

CXT953