

CXT3410 NPN
CXT7410 PNP

**SURFACE MOUNT
COMPLEMENTARY SILICON
LOW $V_{CE(SAT)}$ TRANSISTORS**



SOT-89 CASE

CentralTM

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CXT3410 and CXT7410 are Low $V_{CE(SAT)}$ NPN and PNP silicon transistors packaged in the SOT-89 case. High collector current coupled with a low saturation voltage make this an ideal choice for industrial/consumer applications where operational efficiency and size are high priority.

MARKING CODES:

CXT3410: FULL PART NUMBER
CXT7410: FULL PART NUMBER

FEATURES:

- Low Saturation Voltage
 $V_{CE(SAT)} = 275\text{mV (typ.) @ } I_C = 1.0\text{A}$
- High Current (1.0A Max)
- Low Voltage (40V Max)
- SOT-89 Surface Mount Package

APPLICATIONS:

- Power Management and DC/DC Converters
- Portable and Battery Powered Products
- Cellular and Cordless Phones
- PDAs, Computers, Digital Cameras
- Disk and Tape Drives

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

	SYMBOL		UNITS
Collector-Base Voltage	V_{CB0}	40	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Collector Current	I_C	1.0	A
Collector Current (Peak)	I_{CM}	1.5	A
Power Dissipation	P_D	1.2	W
Operating and Storage			
Junction Temperature	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
Thermal Resistance	θ_{JA}	104	$^\circ\text{C/W}$

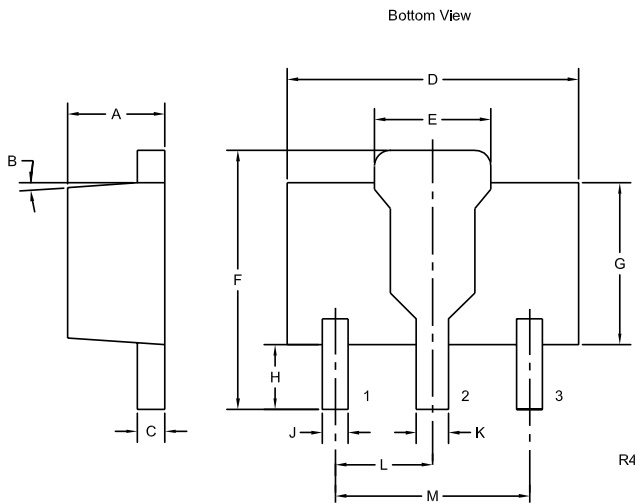
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	CXT3410		CXT7410		MAX	UNITS
			TYP	TYP	TYP	TYP		
I_{CB0}	$V_{CB}=40\text{V}$					100	nA	
I_{EBO}	$V_{EB}=6.0\text{V}$					100	nA	
BV_{CB0}	$I_C=100\mu\text{A}$	40					V	
BV_{CEO}	$I_C=10\text{mA}$	25					V	
BV_{EBO}	$I_E=100\mu\text{A}$	6.0					V	
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		20	25	50		mV	
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=10\text{mA}$		35	40	75		mV	
$V_{CE(SAT)}$	$I_C=200\text{mA}, I_B=20\text{mA}$		75	80	150		mV	
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		130	150	250		mV	
$V_{CE(SAT)}$	$I_C=800\text{mA}, I_B=80\text{mA}$		200	220	400		mV	
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=100\text{mA}$		250	275	450		mV	

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$V_{BE(SAT)}$	$I_C=800\text{mA}$, $I_B=80\text{mA}$		1.1	V
$V_{BE(ON)}$	$V_{CE}=1.0\text{V}$, $I_C=10\text{mA}$		0.9	V
h_{FE}	$V_{CE}=1.0\text{V}$, $I_C=10\text{mA}$	100		
h_{FE}	$V_{CE}=1.0\text{V}$, $I_C=100\text{mA}$	100	300	
h_{FE}	$V_{CE}=1.0\text{V}$, $I_C=500\text{mA}$	100		
h_{FE}	$V_{CE}=1.0\text{V}$, $I_C=1.0\text{A}$	50		
f_T	$V_{CE}=10\text{V}$, $I_C=50\text{mA}$, $f=100\text{MHz}$	100		MHz
C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1.0\text{MHz}$ (CXT3410)		10	pF
C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1.0\text{MHz}$ (CXT7410)		15	pF

SOT-89 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	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