

CMST3410 NPN  
CMST7410 PNP

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

**SUPERmini™**



**SOT-323 CASE**

**Central™**  
Semiconductor Corp.

www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMST3410, CMST7410 types are complementary silicon transistors manufactured by the epitaxial planar process, epoxy molded in a SUPERmini™ surface mount package, designed for battery driven, handheld devices requiring high current and low  $V_{CE(SAT)}$  voltages.

**MARKING CODES: CMST3410: C03  
CMST7410: C07**

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

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

**SYMBOL**

$V_{CBO}$  40  
 $V_{CEO}$  25  
 $V_{EBO}$  6.0  
 $I_C$  1.0  
 $I_{CM}$  1.5  
 $P_D$  275  
 $T_J, T_{stg}$  -65 to +150  
 $\theta_{JA}$  455

**UNITS**

V  
V  
V  
A  
A  
mW  
 $^\circ\text{C}$   
 $^\circ\text{C/W}$

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

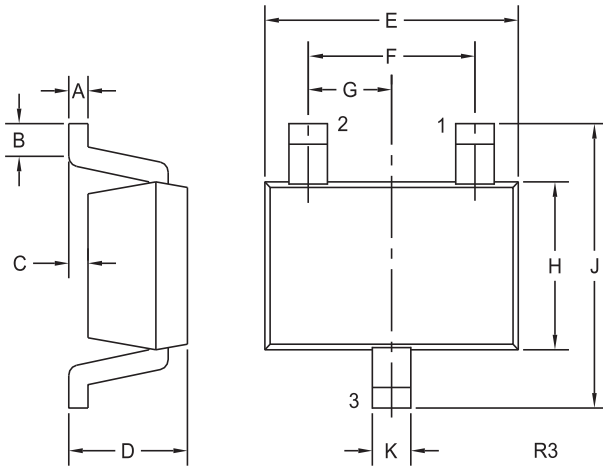
SYMBOL	TEST CONDITIONS	MIN	NPN		PNP		MAX	UNITS
			TYP	TYP	TYP	TYP		
$I_{CBO}$	$V_{CB}=40\text{V}$					100	nA	
$I_{EBO}$	$V_{EB}=6.0\text{V}$					100	nA	
$BV_{CBO}$	$I_C=100\mu\text{A}$	40					V	
$BV_{CEO}$	$I_C=10\text{mA}$	25					V	
$BV_{EBO}$	$I_E=100\mu\text{A}$	6.0					V	
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$			25	30	50	mV	
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=10\text{mA}$			40	50	75	mV	
$V_{CE(SAT)}$	$I_C=200\text{mA}, I_B=20\text{mA}$			80	95	150	mV	
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			190	205	250	mV	
$V_{CE(SAT)}$	$I_C=800\text{mA}, I_B=80\text{mA}$			290	320	400	mV	
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=100\text{mA}$			360	400	450	mV	
$V_{BE(SAT)}$	$I_C=800\text{mA}, I_B=80\text{mA}$					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	
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ (CMST3410)			6.0		10	pF	
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ (CMST7410)				10	15	pF	

R2 (1-August 2011)

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**SILICON TRANSISTORS**



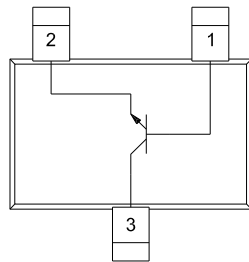
**SOT-323 CASE - MECHANICAL OUTLINE**



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.002	0.008	0.05	0.20
B	0.004	-	0.10	-
C	-	0.004	-	0.10
D	0.031	0.043	0.80	1.10
E	0.071	0.087	1.80	2.20
F	0.051		1.30	
G	0.026		0.65	
H	0.045	0.053	1.15	1.35
J	0.079	0.087	2.00	2.20
K	0.008	0.016	0.20	0.40

SOT-323 (REV: R3)

**PIN CONFIGURATIONS**

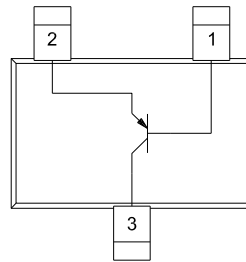


**CMST3410 NPN**

**LEAD CODE:**

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

**MARKING CODE: C03**



**CMST7410 PNP**

**LEAD CODE:**

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

**MARKING CODE: C07**

R2 (1-August 2011)