

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
 θ_{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	

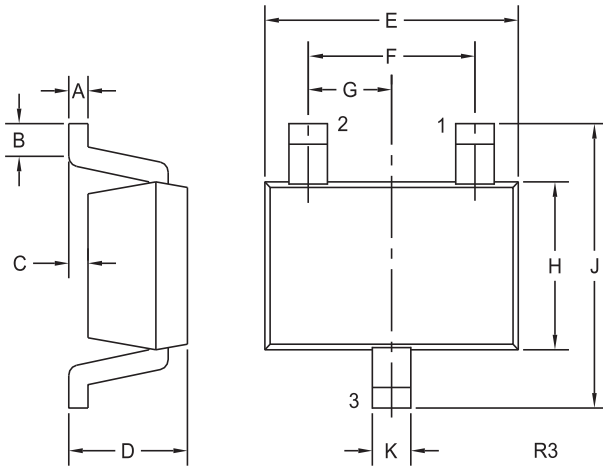
R2 (1-August 2011)

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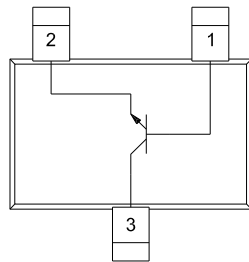
SOT-323 CASE - MECHANICAL OUTLINE



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

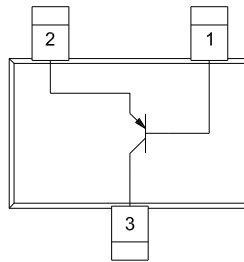


CMST3410 NPN

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)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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