

CMST3410 NPN
 CMST7410 PNP
 SURFACE MOUNT
 SUPERmini™
 COMPLEMENTARY SILICON
 LOW $V_{CE(SAT)}$ TRANSISTORS

SUPERmini™



SOT-323 CASE

Central™

Semiconductor Corp.

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

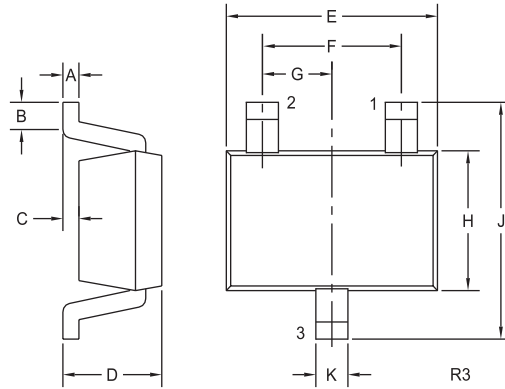
MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	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	275	mW
Operating and Storage			
Junction Temperature	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
Thermal Resistance	θ_{JA}	455	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	CMST3410		CMST7410	MAX	UNITS
			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
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		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
$V_{BE(SAT)}$	$I_C=800\text{mA}, I_B=80\text{mA}$					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)					10	pF
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ (CMST7410)					15	pF

SOT-323 CASE - MECHANICAL OUTLINE



SYMBOL	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)

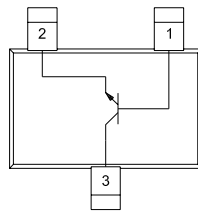
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- 2) EMITTER
- 3) COLLECTOR

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