

CMST5086
CMST5087

SUPERmini™
SURFACE MOUNT
PNP SILICON TRANSISTORS

SUPERmini™



SOT-323 CASE

Central™
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMST5086, CMST5087 types are PNP silicon transistors manufactured by the epitaxial planar process, epoxy molded in a SUPERmini™ surface mount package, designed for applications requiring high gain and low noise.

Marking Codes are 2PC, 2QC Respectively.

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

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

SYMBOL

V_{CBO}
 V_{CEO}
 V_{EBO}
 I_C
 P_D
 T_J, T_{stg}
 Θ_{JA}

50
50
3.0
50
250
-65 to +150
500

UNITS

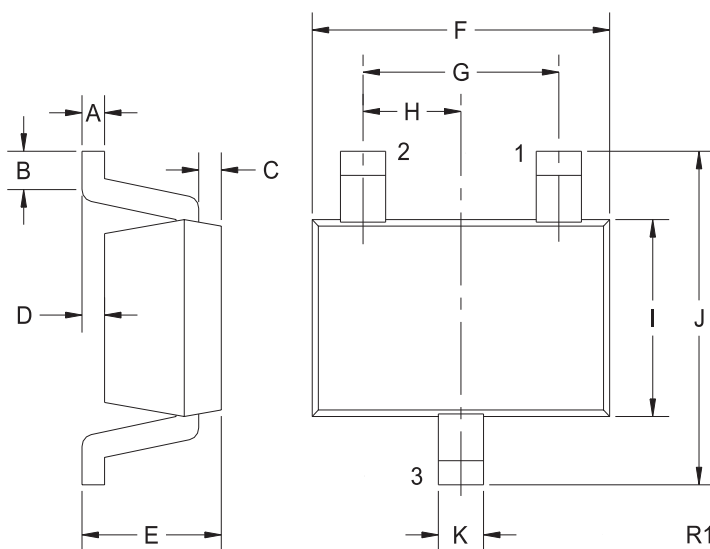
V
V
V
mA
mW
 $^\circ\text{C}$
 $^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	CMST5086		CMST5087		UNITS
		MIN	MAX	MIN	MAX	
I_{CBO}	$V_{CB}=10\text{V}$		10		10	nA
I_{CBO}	$V_{CB}=35\text{V}$		50		50	nA
BV_{CBO}	$I_C=100\mu\text{A}$	50		50		V
BV_{CEO}	$I_C=1.0\text{mA}$	50		50		V
BV_{EBO}	$I_E=100\mu\text{A}$	3.0		3.0		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.30		0.30	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.85		0.85	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=0.1\text{mA}$	150	500	250	800	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	150		250		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	150		250		
f_T	$V_{CE}=5.0\text{V}, I_C=500\mu\text{A}, f=20\text{MHz}$	40		40		MHz
C_{ob}	$V_{CB}=5.0\text{V}, I_E=0, f=1.0\text{MHz}$		4.0		4.0	pF
h_{fe}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	150	600	250	900	
NF	$V_{CE}=5.0\text{V}, I_C=20\text{mA}, R_S=10\text{k}\Omega$ $f=10\text{Hz to } 15.7\text{kHz}$		3.0		2.0	dB
NF	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}, R_S=3.0\text{k}\Omega$ $f=1.0\text{kHz}$		3.0		2.0	dB

R0 (11-January 2002)

SOT-323 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODE:

CMST5086 - 2PC
CMST5087 - 2QC

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.004	0.008	0.10	0.20
B	0.004	-	0.10	-
C	0.004	0.008	0.10	0.20
D	-	0.004	-	0.10
E	0.031	0.043	0.80	1.10
F	0.071	0.087	1.80	2.20
G	0.051		1.30	
H	0.026		0.65	
I	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: R1)