

CMST5086
CMST5087

**SURFACE MOUNT
PNP SILICON TRANSISTOR**

SUPERmini™



SOT-323 CASE



www.centralemi.com

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: CMST5086: 2PC
CMST5087: 2QC**

MAXIMUM RATINGS: (T_A=25°C)

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

SYMBOL

V_{CBO} 50
V_{CEO} 50
V_{EBO} 3.0
I_C 50
P_D 275
T_J, T_{stg} -65 to +150
θ_{JA} 455

UNITS

V
V
V
mA
mW
°C
°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	CMST5086		CMST5087		UNITS
		MIN	MAX	MIN	MAX	
I _{CBO}	V _{CB} =10V	-	10	-	10	nA
I _{CBO}	V _{CB} =35V	-	50	-	50	nA
BV _{CBO}	I _C =100μA	50	-	50	-	V
BV _{CEO}	I _C =1.0mA	50	-	50	-	V
BV _{EBO}	I _E =100μA	3.0	-	3.0	-	V
V _{CE(SAT)}	I _C =10mA, I _B =1.0mA	-	0.30	-	0.30	V
V _{BE(SAT)}	I _C =10mA, I _B =1.0mA	-	0.85	-	0.85	V
h _{FE}	V _{CE} =5.0V, I _C =0.1mA	150	500	250	800	
h _{FE}	V _{CE} =5.0V, I _C =1.0mA	150	-	250	-	
h _{FE}	V _{CE} =5.0V, I _C =10mA	150	-	250	-	
f _T	V _{CE} =5.0V, I _C =500μA, f=20MHz	40	-	40	-	MHz
C _{ob}	V _{CB} =5.0V, I _E =0, f=1.0MHz	-	4.0	-	4.0	pF
h _{fe}	V _{CE} =5.0V, I _C =1.0mA, f=1.0kHz	150	600	250	900	
NF	V _{CE} =5.0V, I _C =20mA, R _S =10kΩ f=10Hz to 15.7kHz	-	3.0	-	2.0	dB
NF	V _{CE} =5.0V, I _C =100μA, R _S =3.0kΩ f=1.0kHz	-	3.0	-	2.0	dB

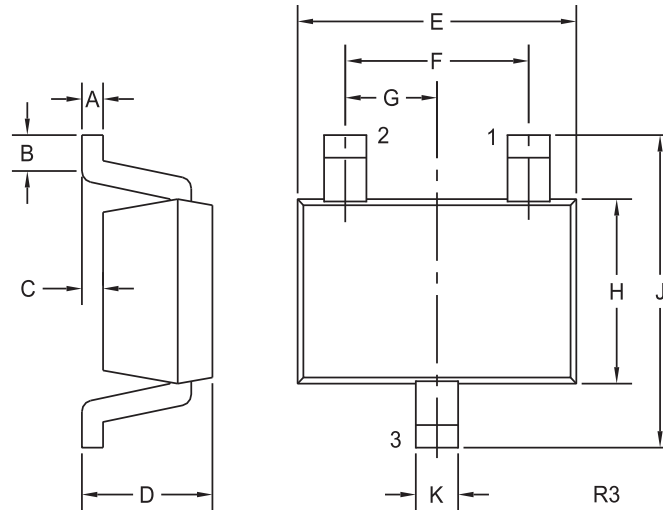
R3 (9-February 2010)

CMST5086
CMST5087

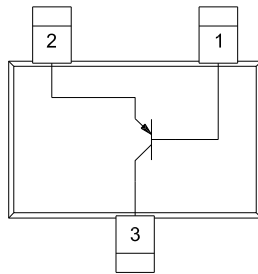
SURFACE MOUNT
PNP SILICON TRANSISTOR



SOT-323 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

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

MARKING CODES:

CMST5086: 2PC
CMST5087: 2QC

DIMENSIONS

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)

R3 (9-February 2010)