

CMST5086  
CMST5087

**SURFACE MOUNT  
PNP SILICON TRANSISTOR**

**SUPERmini™**



**SOT-323 CASE**



[www.centrasemi.com](http://www.centrasemi.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<sub>A</sub>=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<sub>CBO</sub> 50  
V<sub>CEO</sub> 50  
V<sub>EBO</sub> 3.0  
I<sub>C</sub> 50  
P<sub>D</sub> 275  
T<sub>J</sub>, T<sub>stg</sub> -65 to +150  
θ<sub>JA</sub> 455

**UNITS**

V  
V  
V  
mA  
mW  
°C  
°C/W

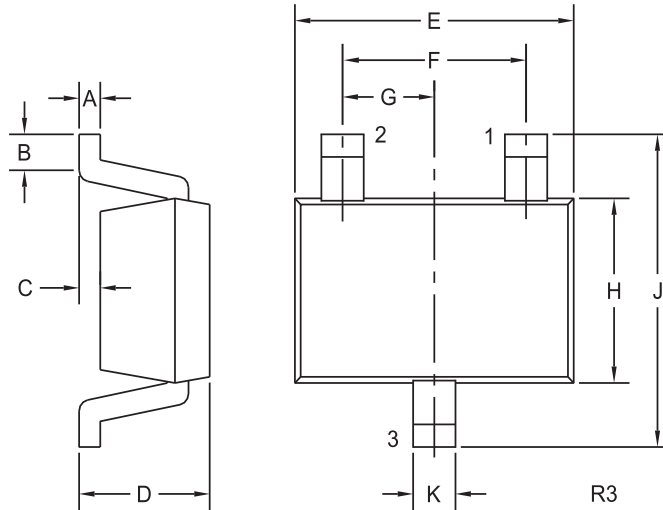
**ELECTRICAL CHARACTERISTICS: (T<sub>A</sub>=25°C unless otherwise noted)**

SYMBOL	TEST CONDITIONS	CMST5086		CMST5087		UNITS
		MIN	MAX	MIN	MAX	
I <sub>CBO</sub>	V <sub>CB</sub> =10V	-	10	-	10	nA
I <sub>CBO</sub>	V <sub>CB</sub> =35V	-	50	-	50	nA
BV <sub>CBO</sub>	I <sub>C</sub> =100μA	50	-	50	-	V
BV <sub>CEO</sub>	I <sub>C</sub> =1.0mA	50	-	50	-	V
BV <sub>EBO</sub>	I <sub>E</sub> =100μA	3.0	-	3.0	-	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA	-	0.30	-	0.30	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA	-	0.85	-	0.85	V
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =0.1mA	150	500	250	800	
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0mA	150	-	250	-	
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA	150	-	250	-	
f <sub>T</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =500μA, f=20MHz	40	-	40	-	MHz
C <sub>ob</sub>	V <sub>CB</sub> =5.0V, I <sub>E</sub> =0, f=1.0MHz	-	4.0	-	4.0	pF
h <sub>fe</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0mA, f=1.0kHz	150	600	250	900	
NF	V <sub>CE</sub> =5.0V, I <sub>C</sub> =20mA, R <sub>S</sub> =10kΩ f=10Hz to 15.7kHz	-	3.0	-	2.0	dB
NF	V <sub>CE</sub> =5.0V, I <sub>C</sub> =100μA, R <sub>S</sub> =3.0kΩ f=1.0kHz	-	3.0	-	2.0	dB

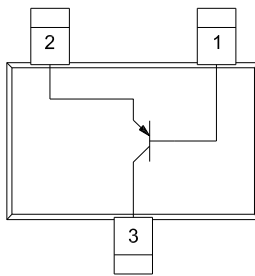
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 SURFACE MOUNT  
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SOT-323 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

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

MARKING CODES:

CMST5086: 2PC  
 CMST5087: 2QC

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)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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

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