

## Tiny Low $V_{CE(SAT)}$ Transistors

60V, 200mA



**CET3904E (NPN)**  
**CET3906E (PNP)**

SOT-883L



Top View Bottom View

1.05mm x 0.65mm x 0.4mm(H)



**CMBT3904E (NPN)**  
**CMBT3906E (PNP)**

SOT-923



1.1mm x 0.65mm x 0.41mm(H)

Sample Devices  
available  
upon request.

### features

- Enhanced Specification including an improved maximum  $V_{CE(SAT)}$  of 0.1V @ 10mA
- Space Saving Low Profile SOT-883L and SOT-923 packages
- RoHS compliant and Pb free



### applications

- DC/DC Converters
- Voltage Clamping
- Protection Circuits
- Battery powered products including Cell Phones, Digital Cameras, Pagers, PDAs, Laptop Computers, etc.

### description

The CET3904E (NPN), CET3906E (PNP), CMBT3904E (NPN), and CMBT3906E (PNP), are Low  $V_{CE(SAT)}$  transistors designed for applications where energy efficiency, ultra small size, and reasonable power dissipation are the prime requirements. Packaged in the TLP™ SOT-883L and FEMTOmini™ SOT-923 packages, these devices provide performance characteristics suitable for the most demanding size constrained applications.

### selection guide



#### Low $V_{CE(SAT)}$ Transistors

Central Part No.	$BV_{CBO}$	$BV_{CEO}$	$BV_{EBO}$	$I_{CEV}$ @ $V_{CE}$		$h_{FE}$		@ $V_{CE}$		@ $I_C$	$V_{CE(SAT)}$		@ $I_C$	$C_{ob}$	$f_T$	NF	Case
	MIN	MIN	MIN	(nA) MAX	(V)	MIN	MAX	(V)	(mA)	(V) MAX	(mA)	(pF) MAX	(MHz) MIN	(dB) MAX			

#### TLP™ SOT-883L package

NPN	<b>CET3904E</b>	60	40	6.0	50	30	100	300	1.0	10	0.1 0.2	10 50	4.0	300	4.0	SOT-883L
PNP	<b>CET3906E</b>	60	40	6.0	50	30	100	300	1.0	10	0.1 0.2	10 50	4.0	300	4.0	SOT-883L

#### FEMTOmini™ SOT-923 package

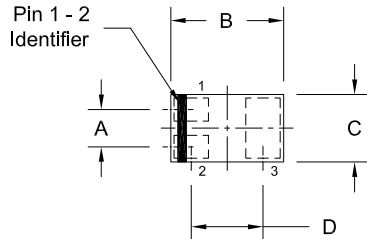
NPN	<b>CMBT3904E</b>	60	40	6.0	50	30	100	300	1.0	10	0.1 0.2	10 50	4.0	300	4.0	SOT-923
PNP	<b>CMBT3906E</b>	60	40	6.0	50	30	100	300	1.0	10	0.1 0.2	10 50	4.0	300	4.0	SOT-923

Enhanced 3904 and 3906 Specification listed in Bold

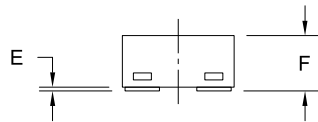
# Tiny Low VCE(SAT) Transistors

## Mechanical Specifications

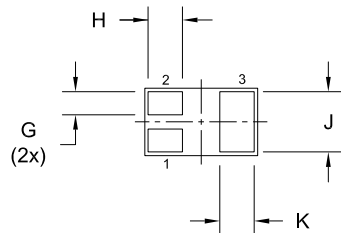
### SOT-883L



Top View



Side View



Bottom View

R2

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.014		0.35	
B	0.037	0.041	0.95	1.05
C	0.022	0.026	0.55	0.65
D	0.026		0.65	
E	0.000	0.002	0.00	0.05
F	0.012	0.016	0.30	0.40
G	0.005	0.007	0.13	0.18
H	0.008	0.012	0.20	0.30
J	0.018	0.022	0.45	0.55
K	0.008	0.012	0.20	0.30

SOT-883L (REV:R2)

#### LEAD CODE:

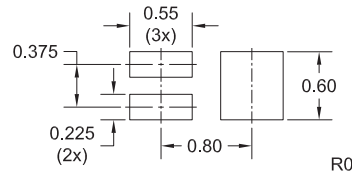
- 1) BASE
- 2) EMITTER
- 3) COLLECTOR

#### MARKING CODE

CET3904E: C  
CET3906E: D

### Mounting Pad Geometry

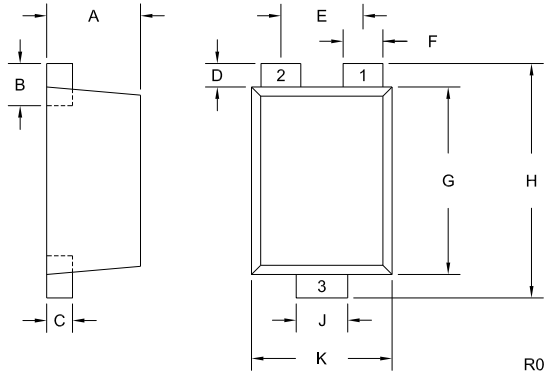
(Dimensions in mm)



### SOT-923

### Mounting Pad Geometry

(Dimensions in mm)



R0

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.015	0.016	0.39	0.41
B	0.004	0.010	0.10	0.26
C	0.003	0.006	0.08	0.14
D	0.002	0.006	0.05	0.15
E	0.014		0.35	
F	0.005	0.009	0.12	0.22
G	0.030	0.033	0.75	0.85
H	0.035	0.043	0.90	1.10
J	0.007	0.011	0.17	0.27
K	0.022	0.026	0.55	0.65

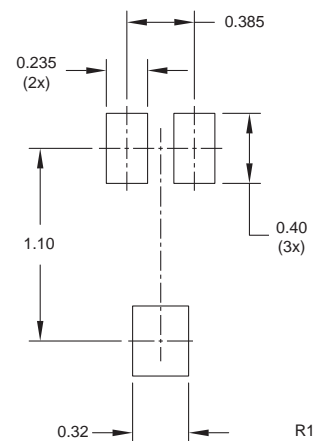
SOT-923 (REV: R0)

#### LEAD CODE:

- 1) BASE
- 2) EMITTER
- 3) COLLECTOR

#### MARKING CODE

CMBT3904E: B  
CMBT3906E: G



R1

**Central**<sup>TM</sup>  
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PA Low VCE SAT