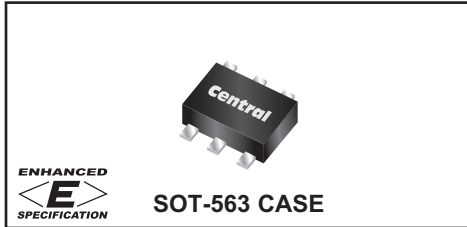


CMLT5078E NPN/PNP
 CMLT5087E PNP/PNP
 CMLT5088E NPN/PNP

**ENHANCED SPECIFICATION
 SURFACE MOUNT SILICON
 DUAL TRANSISTORS**



www.centrasemi.com



DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMLT5078E, CMLT5087E, and CMLT5088E are surface mount silicon transistors with enhanced specifications designed for applications requiring high gain and low noise.

**MARKING CODES: CMLT5078E: L78
 CMLT5087E: L87
 CMLT5088E: L88 or 88**

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		UNITS
V _{CB0}	50	V
V _{CEO}	50	V
V _{EBO}	5.0	V
I _C	100	mA
P _D	350	mW
T _J , T _{stg}	-65 to +150	°C
θ _{JA}	357	°C/W

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

SYMBOL	TEST CONDITIONS	MIN	TYP		MAX	UNITS
			NPN	PNP		
I _{CB0}	V _{CB} =20V				50	nA
I _{EBO}	V _{EB} =3.0V				50	nA
◆BV _{CB0}	I _C =100μA	50	135	150		V
◆BV _{CEO}	I _C =1.0mA	50	65	105		V
◆BV _{EBO}	I _E =100μA	5.0	8.7	7.5		V
◆V _{CE(SAT)}	I _C =10mA, I _B =1.0mA		45	50	100	mV
◆◆V _{CE(SAT)}	I _C =100mA, I _B =10mA		110	225	400	mV
V _{BE(SAT)}	I _C =10mA, I _B =1.0mA		700	700	800	mV
◆h _{FE}	V _{CE} =5.0V, I _C =0.1mA	300	430	390	900	
h _{FE}	V _{CE} =5.0V, I _C =1.0mA	300	435	380		
◆h _{FE}	V _{CE} =5.0V, I _C =10mA	300	430	350		
◆◆h _{FE}	V _{CE} =5.0V, I _C =100mA	50	125	75		
◆f _T	V _{CE} =5.0V, I _C =500μA, f=20MHz	100				MHz
C _{ob}	V _{CB} =5.0V, I _E =0, f=1.0MHz				4.0	pF
C _{ib}	V _{BE} =0.5V, I _C =0, f=1.0MHz				15	pF
h _{fe}	V _{CE} =5.0V, I _C =1.0mA, f=1.0kHz	350			1400	
NF	V _{CE} =5.0V, I _C =100μA, R _S =10kΩ, f=10Hz to 15.7kHz				3.0	dB

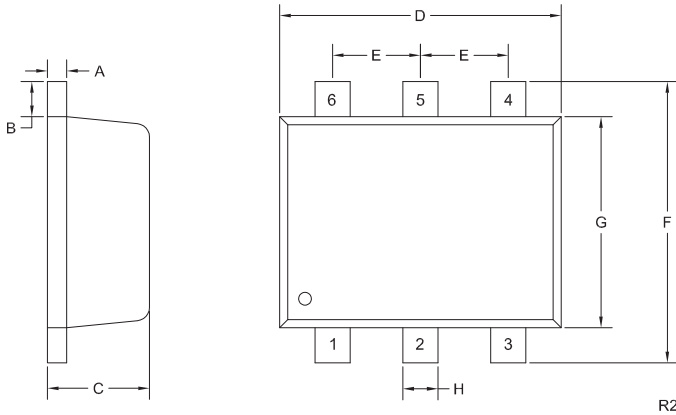
- ◆ Enhanced specification
- ◆◆ Additional Enhanced specification

R6 (29-June 2015)

CMLT5078E NPN/PNP
CMLT5087E PNP/PNP
CMLT5088E NPN/PNP
ENHANCED SPECIFICATION
SURFACE MOUNT SILICON
DUAL TRANSISTORS



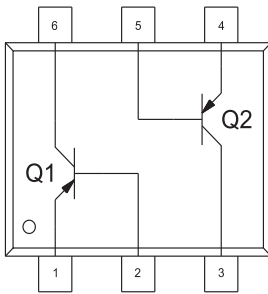
SOT-563 CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.0027	0.007	0.07	0.18
B	0.008		0.20	
C	0.017	0.024	0.45	0.60
D	0.059	0.067	1.50	1.70
E	0.020		0.50	
F	0.059	0.067	1.50	1.70
G	0.043	0.051	1.10	1.30
H	0.006	0.012	0.15	0.30

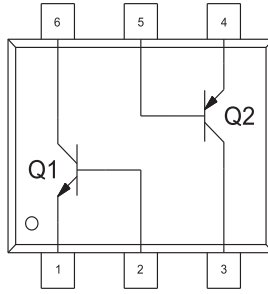
SOT-563 (REV: R2)

PIN CONFIGURATIONS



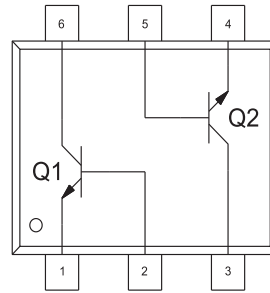
CMLT5087E

MARKING CODE: L87



CMLT5078E

MARKING CODE: L78



CMLT5088E

MARKING CODE: L88 or 88

LEAD CODE:

- 1) Emitter Q1
- 2) Base Q1
- 3) Collector Q2
- 4) Emitter Q2
- 5) Base Q2
- 6) Collector Q1

R6 (29-June 2015)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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