

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

**ENHANCED SPECIFICATION
SURFACE MOUNT SILICON
DUAL TRANSISTORS**



SOT-563 CASE



www.centra-semi.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: ($T_A=25^\circ\text{C}$)

♦ Collector-Base Voltage

♦ Collector-Emitter Voltage

♦ Emitter-Base Voltage

Continuous Collector Current

Power Dissipation

Operating and Storage Junction Temperature

Thermal Resistance

SYMBOL

V_{CB0}

50

UNITS

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

$^\circ\text{C}$

Θ_{JA}

357

$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP		MAX	UNITS
			NPN	PNP		
I_{CB0}	$V_{CB}=20\text{V}$				50	nA
I_{EBO}	$V_{EB}=3.0\text{V}$				50	nA
♦ BV_{CB0}	$I_C=100\mu\text{A}$	50	135	150		V
♦ BV_{CEO}	$I_C=1.0\text{mA}$	50	65	105		V
♦ BV_{EBO}	$I_E=100\mu\text{A}$	5.0	8.7	7.5		V
♦ $V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		45	50	100	mV
♦♦ $V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=10\text{mA}$		110	225	400	mV
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		700	700	800	mV
♦ h_{FE}	$V_{CE}=5.0\text{V}, I_C=0.1\text{mA}$	300	430	390	900	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	300	435	380		
♦ h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	300	430	350		
♦♦ h_{FE}	$V_{CE}=5.0\text{V}, I_C=100\text{mA}$	50	125	75		
♦ f_T	$V_{CE}=5.0\text{V}, I_C=500\mu\text{A}, f=20\text{MHz}$	100				MHz
C_{ob}	$V_{CB}=5.0\text{V}, I_E=0, f=1.0\text{MHz}$				4.0	pF
C_{ib}	$V_{BE}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$				15	pF
h_{fe}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	350			1400	
NF	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}, R_S=10\text{k}\Omega, f=10\text{Hz to } 15.7\text{kHz}$				3.0	dB

♦ Enhanced specification

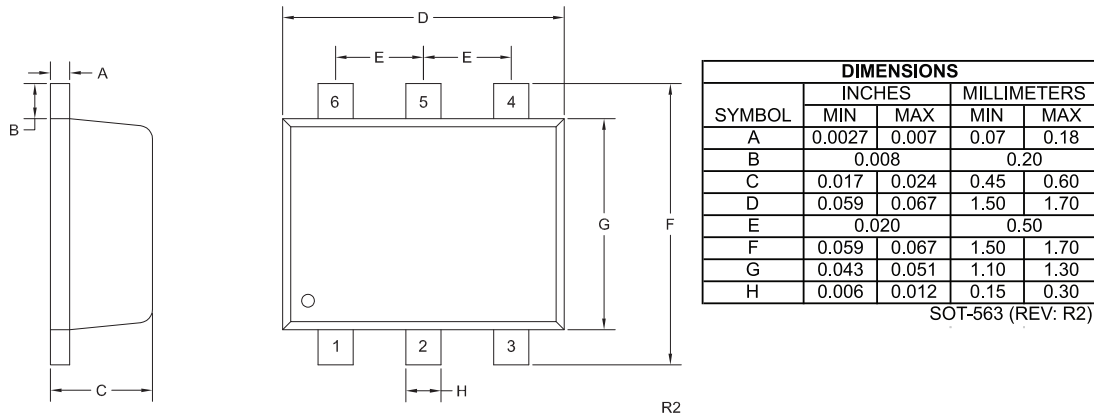
♦♦ Additional Enhanced specification

R6 (29-June 2015)

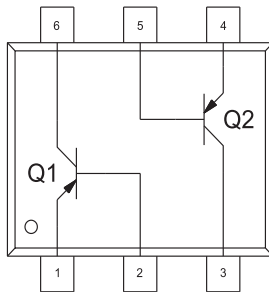
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SOT-563 CASE - MECHANICAL OUTLINE

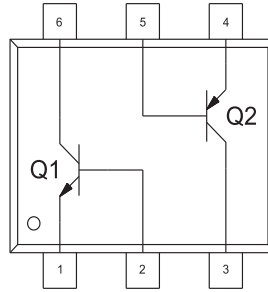


PIN CONFIGURATIONS



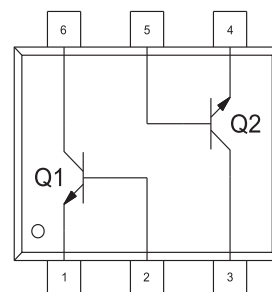
CMLT5087E

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.

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- 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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