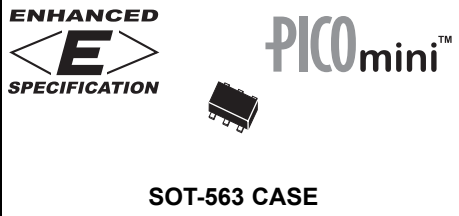


CMLT5078E NPN/PNP
 CMLT5087E PNP/PNP
 CMLT5088E NPN/NPN

ENHANCED SPECIFICATION
PICOmini™ SURFACE MOUNT
SILICON DUAL TRANSISTORS



Central™

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMLT5078E, CMLT5087E, and CMLT5088E, are Silicon transistors in a PICOmini™ surface mount package with enhanced specifications designed for applications requiring high gain and low noise.

MARKING CODE & CONFIGURATION:

CMLT5078E: DUAL, COMPLEMENTARY: L78
CMLT5087E: DUAL, PNP: L87
CMLT5088E: DUAL, NPN: L88

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

	SYMBOL		UNITS
◆ Collector-Base Voltage	V_{CBO}	50	V
◆ Collector-Emitter Voltage	V_{CEO}	50	V
◆ Emitter-Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	100	mA
Power Dissipation	P_D	350	mW
Operating and Storage			
Junction Temperature	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
Thermal Resistance	θ_{JA}	357	$^\circ\text{C/W}$

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

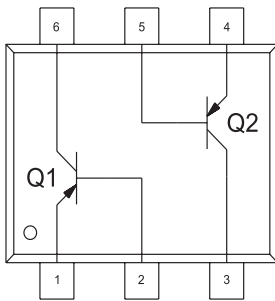
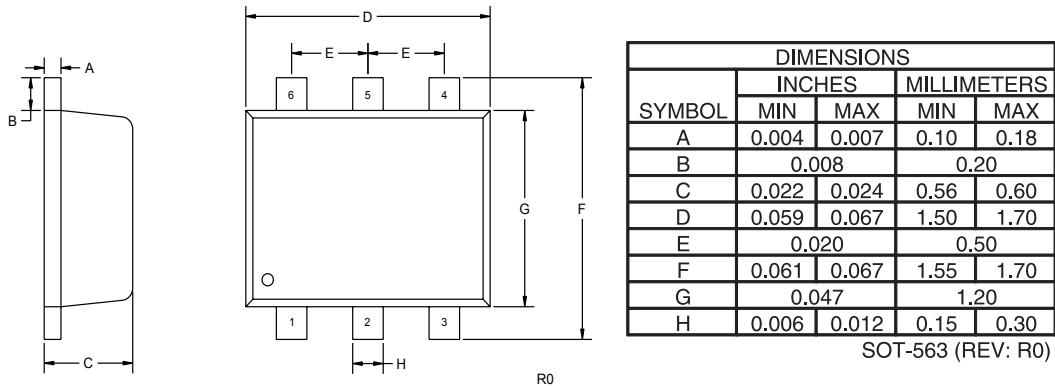
SYMBOL	TEST CONDITIONS	TYP			UNITS	
		MIN	NPN	PNP		
I_{CBO}	$V_{CB}=20\text{V}$			50	nA	
I_{EBO}	$V_{EB}=3.0\text{V}$			50	nA	
◆ BV_{CBO}	$I_C=100\mu\text{A}$	50	135	150	V	
◆ BV_{CEO}	$I_C=1.0\text{mA}$	50	65	105	V	
◆ BV_{EBO}	$I_E=100\mu\text{A}$	5.0	8.7	7.5	V	
◆ $V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		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.

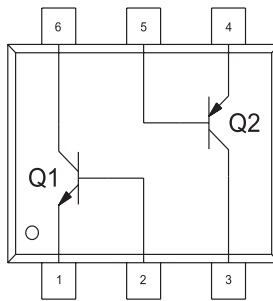
R2 (13-November 2002)

ENHANCED SPECIFICATION
PICoMini™ SURFACE MOUNT
SILICON DUAL TRANSISTORS

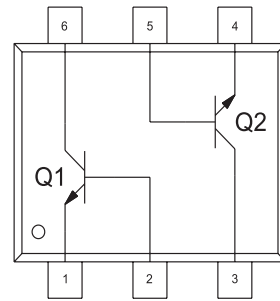
SOT-563 CASE - MECHANICAL OUTLINE



CMLT5087E
MARKING CODE: L87



CMLT5078E
MARKING CODE: L78



CMLT5088E
MARKING CODE: L88

- LEAD CODE:**
 (FOR ALL DEVICES):
- 1) EMITTER Q1
 - 2) BASE Q1
 - 3) COLLECTOR Q2
 - 4) EMITTER Q2
 - 5) BASE Q2
 - 6) COLLECTOR Q1



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