

CMLT8099M

**SURFACE MOUNT
DUAL, MATCHED
NPN SILICON TRANSISTORS**

PICOmini™



SOT-563 CASE

• Device is **Halogen Free** by design

APPLICATIONS:

- Small signal general purpose amplifiers

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



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DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMLT8099M consists of two individual, isolated 8099 NPN silicon transistors with matched V_{BE(ON)} characteristics. This PICOmini™ device is manufactured by the epitaxial planar process and epoxy molded in an SOT-563 surface mount package.

MARKING CODE: 8CM

FEATURES:

- Transistor pair matched for V_{BE(ON)}

SYMBOL		UNITS
V _{CBO}	80	V
V _{CEO}	80	V
V _{EBO}	6.0	V
I _C	500	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	MAX	UNITS
I _{CBO}	V _{CB} =80V		0.1	μA
I _{EBO}	V _{BE} =6.0V		0.1	μA
BV _{CBO}	I _C =100μA	80		V
BV _{CEO}	I _C =10mA	80		V
BV _{EBO}	I _E =10μA	6.0		V
V _{CE(SAT)}	I _C =100mA, I _B =5.0mA		0.4	V
V _{CE(SAT)}	I _C =100mA, I _B =10mA		0.3	V
V _{BE(ON)}	V _{CE} =5.0V, I _C =10mA	0.6	0.8	V
h _{FE}	V _{CE} =5.0V, I _C =1.0mA	100	300	
h _{FE}	V _{CE} =5.0V, I _C =10mA	100		
h _{FE}	V _{CE} =5.0V, I _C =100mA	75		
f _T	V _{CE} =5.0V, I _C =10mA, f=100MHz	150		MHz
C _{ob}	V _{CB} =10V, I _E =0, f=1.0MHz		6.0	pF
C _{ib}	V _{BE} =0.5V, I _C =0, f=1.0MHz		25	pF

MATCHING CHARACTERISTICS:

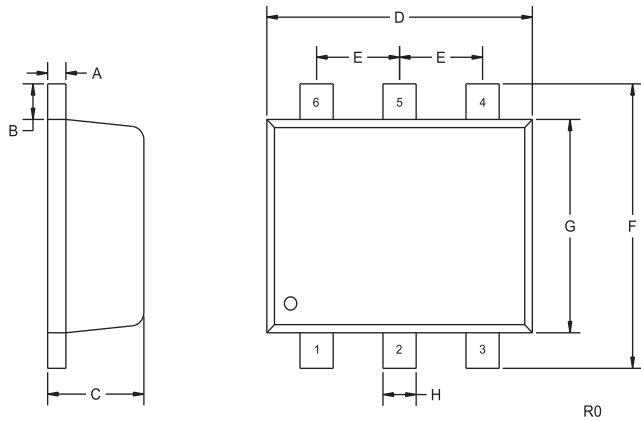
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
V _{BE1} -V _{BE2}	V _{CE} =5.0V, I _C =1.0μA		10	mV
V _{BE1} -V _{BE2}	V _{CE} =5.0V, I _C =5.0μA		10	mV
V _{BE1} -V _{BE2}	V _{CE} =5.0V, I _C =10μA		10	mV
V _{BE1} -V _{BE2}	V _{CE} =5.0V, I _C =100μA		10	mV

R1 (20-January 2010)

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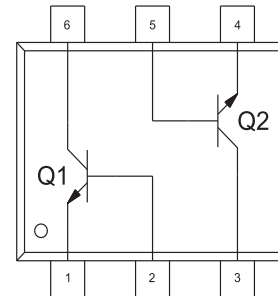
SOT-563 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.004	0.007	0.10	0.18
B	0.008		0.20	
C	0.022	0.024	0.56	0.60
D	0.059	0.067	1.50	1.70
E	0.020		0.50	
F	0.061	0.067	1.55	1.70
G	0.047		1.20	
H	0.006	0.012	0.15	0.30

SOT-563 (REV: R0)

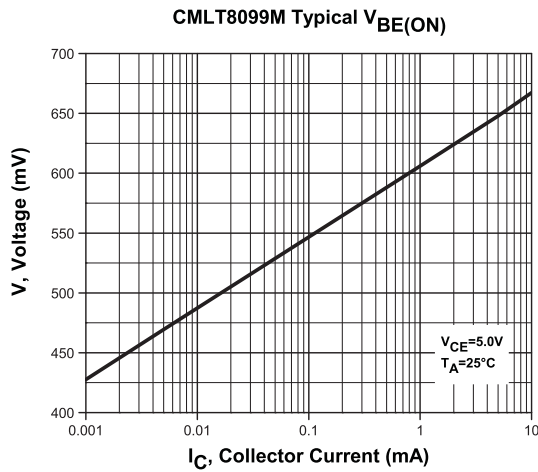
PIN CONFIGURATION



LEAD CODE:

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

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