

CMLTA44
SURFACE MOUNT
PICOmini™
EXTREMELY HIGH VOLTAGE
NPN SILICON TRANSISTOR



SOT-563 CASE

Central™

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMLTA44 type is an NPN High Voltage transistor, epoxy molded in a space saving PICOmini™ SOT-563 surface mount package and designed for extremely high voltage applications.

MARKING CODE: 44C

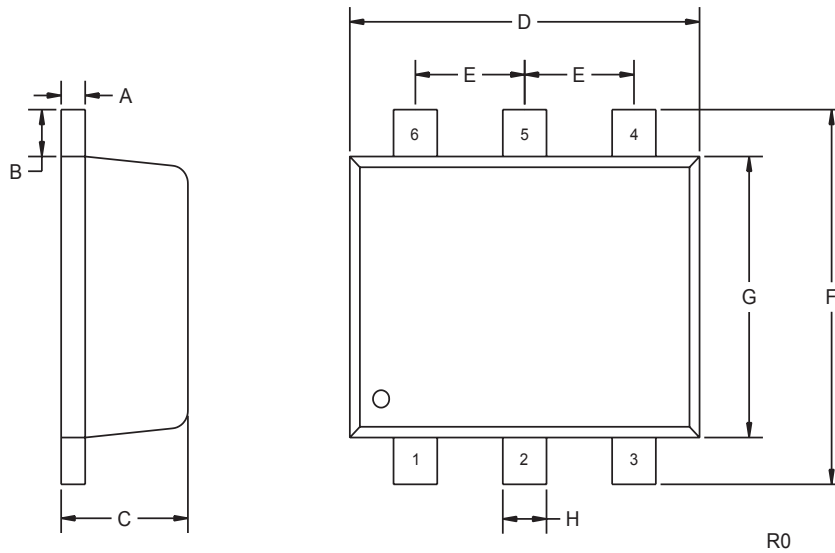
MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	450	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Continuous Collector Current	I_C	300	mA
Power Dissipation	P_D	250	mW
Operating and Storage			
Junction Temperature	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
Thermal Resistance	θ_{JA}	500	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=400\text{V}$		100	nA
I_{CES}	$V_{CE}=400\text{V}$		500	nA
I_{EBO}	$V_{BE}=4.0\text{V}$		100	nA
BV_{CBO}	$I_C=100\mu\text{A}$	450		V
BV_{CES}	$I_C=100\mu\text{A}$	450		V
BV_{CEO}	$I_C=1.0\text{mA}$	400		V
BV_{EBO}	$I_E=10\mu\text{A}$	6.0		V
$V_{CE(SAT)}$	$I_C=1.0\text{mA}, I_B=0.1\text{mA}$		0.40	V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.50	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.75	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.75	V
h_{FE}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	40		
h_{FE}	$V_{CE}=10\text{V}, I_C=10\text{mA}$	50	200	
h_{FE}	$V_{CE}=10\text{V}, I_C=50\text{mA}$	45		
h_{FE}	$V_{CE}=10\text{V}, I_C=100\text{mA}$	20		
f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=10\text{MHz}$	20		MHz
C_{ob}	$V_{CB}=20\text{V}, I_E=0, f=1.0\text{MHz}$		7.0	pF
C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		130	pF

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)

LEAD CODE:

- 1) COLLECTOR
- 2) COLLECTOR
- 3) BASE
- 4) EMITTER
- 5) COLLECTOR
- 6) COLLECTOR

Pins 1, 2, 5 and 6 are common.

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R0 (28-October 2004)