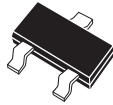


CMPTA13 CMPTA14 NPN  
 CMPTA63 CMPTA64 PNP

SILICON COMPLEMENTARY  
 DARLINGTON TRANSISTORS



SOT-23 CASE

# Central<sup>TM</sup>

Semiconductor Corp.

**Description:**

The CENTRAL SEMICONDUCTOR CMPTA13, CMPTA63 series types are complementary silicon darlington transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for applications requiring extremely high gain.

**MARKING CODES:**

CMPTA13: C1M CMPTA14: C1N  
 CMPTA63: C2U CMPTA64: C2V

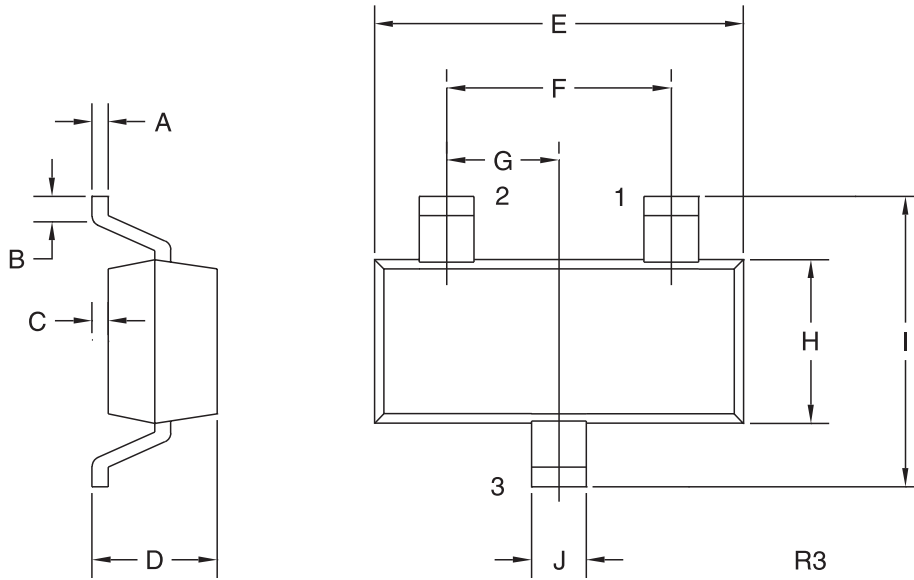
**MAXIMUM RATINGS** (T<sub>A</sub>=25°C)

	SYMBOL		UNITS
Collector-Base Voltage	V <sub>CBO</sub>	30	V
Collector-Emitter Voltage	V <sub>CES</sub>	30	V
Emitter-Base Voltage	V <sub>EBO</sub>	10	V
Continuous Collector Current	I <sub>C</sub>	500	mA
Power Dissipation	P <sub>D</sub>	350	mW
Operating and Storage			
Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150	°C
Thermal Resistance	θ <sub>JA</sub>	357	°C/W

**ELECTRICAL CHARACTERISTICS** (T<sub>A</sub>=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>CBO</sub>	V <sub>CB</sub> =30V		100	nA
I <sub>EBO</sub>	V <sub>BE</sub> =10V		100	nA
BV <sub>CES</sub>	I <sub>C</sub> =100μA	30		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =0.1mA		1.5	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =100mA		2.0	V
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA (CMPTA13, CMPTA63)	5,000		
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA (CMPTA14, CMPTA64)	10,000		
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =100mA (CMPTA13, CMPTA63)	10,000		
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =100mA (CMPTA14, CMPTA64)	20,000		
f <sub>T</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA, f=100MHz	125		MHz

SOT-23 CASE - MECHANICAL OUTLINE



**LEAD CODE:**

- 1) BASE
- 2) EMITTER
- 3) COLLECTOR

**MARKING CODES:**

- CMPTA13: C1M
- CMPTA14: C1N
- CMPTA63: C2U
- CMPTA64: C2V

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)



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