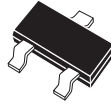


**CMPT6427**  
**NPN SILICON**  
**DARLINGTON TRANSISTOR**



**SOT-23 CASE**

# Central<sup>TM</sup>

**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPT6427 type is a NPN silicon darlington transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for applications requiring extremely high gain.

**MARKING CODE: C1V**

• *Pb-free plating available upon request.*

**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

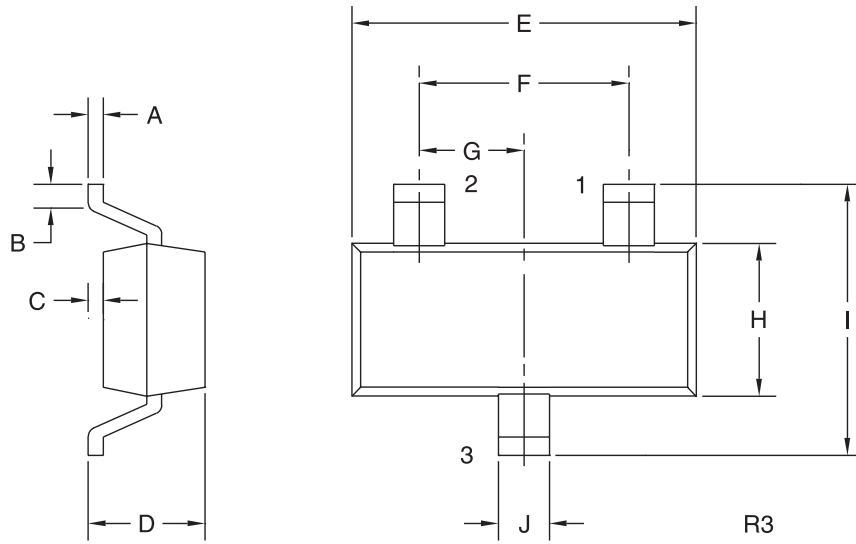
SYMBOL		UNITS
$V_{CBO}$	40	V
$V_{CEO}$	40	V
$V_{EBO}$	12	V
$I_C$	500	mA
$P_D$	350	mW
$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
$\theta_{JA}$	357	$^\circ\text{C}/\text{W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=30\text{V}$		50	nA
$I_{CEO}$	$V_{CE}=25\text{V}$		1.0	$\mu\text{A}$
$I_{EBO}$	$V_{BE}=10\text{V}$		50	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$	40		V
$BV_{CEO}$	$I_C=10\text{mA}$	40		V
$BV_{EBO}$	$I_E=10\mu\text{A}$	12		V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=0.5\text{mA}$		1.20	V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=0.5\text{mA}$		1.50	V
$V_{BE(SAT)}$	$I_C=500\text{mA}, I_B=0.5\text{mA}$		2.00	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=50\text{mA}$		1.75	V
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	10K	100K	
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=100\text{mA}$	20K	200K	
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=500\text{mA}$	14K	140K	
$f_T$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	130		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		7.0	pF
$C_{ib}$	$V_{BE}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		15	pF
NF	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, R_S=100\text{k}\Omega,$ $f=1.0\text{kHz TO } 15.7\text{kHz}$		10	dB

R5 (6-May 2008)

SOT-23 CASE - MECHANICAL OUTLINE



**LEAD CODE:**

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

**MARKING CODE: C1V**

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)