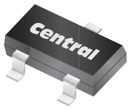
CMPT6427

SURFACE MOUNT NPN SILICON DARLINGTON TRANSISTOR



SOT-23 CASE

Central Semiconductor Corp.
www.centralsemi.com

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

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	12	V
Continuous Collector Current	I_C	500	mA
Power Dissipation	P_D	350	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance	Θ_{JA}	357	°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

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

R6 (1-February 2010)

CMPT6427

SURFACE MOUNT
NPN SILICON
DARLINGTON TRANSISTOR

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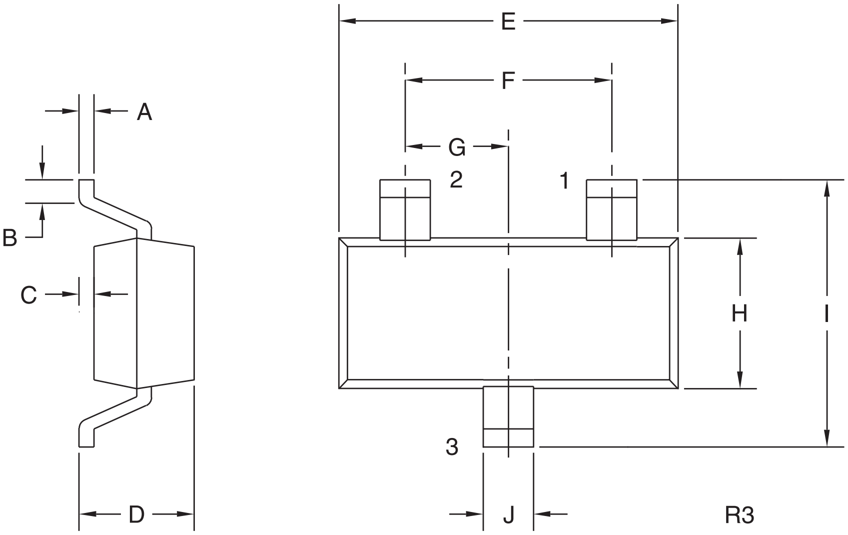
SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:
1) Base
2) Emitter
3) Collector

MARKING CODE: C1V

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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)