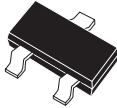


CMPT6427

**NPN SILICON
DARLINGTON TRANSISTOR**



SOT-23 CASE

DESCRIPTION:

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

Marking Code is C1V.

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

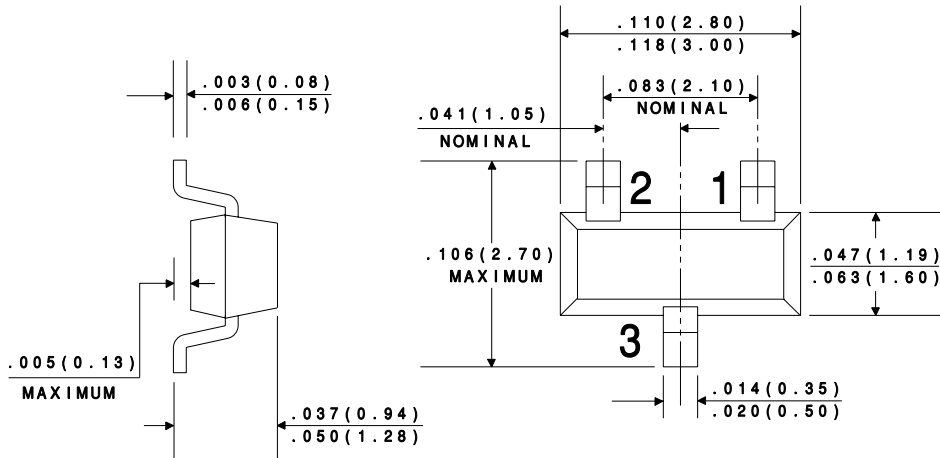
	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	12	V
Collector Current	I_C	500	mA
Power Dissipation	P_D	350	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
Thermal Resistance	θ_{JA}	357	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=30\text{V}$		50	nA
I_{CEO}	$V_{CE}=25\text{V}$		1.0	μA
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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
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
N_F	$V_{CE}=5.0V, I_C=1.0mA, R_S=100k\Omega,$ $f=1.0kHz$ TO 15.7kHz		10	dB

All dimensions in inches (mm).



LEAD CODE:

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