

CMPT6517 NPN  
CMPT6520 PNP

COMPLEMENTARY SILICON  
HIGH VOLTAGE TRANSISTORS



SOT-23 CASE

**Central**<sup>TM</sup>  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPT6517, CMPT6520 types are complementary silicon transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high voltage driver and amplifier applications.

**Marking Codes are C1Z and C2Z  
Respectively.**

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

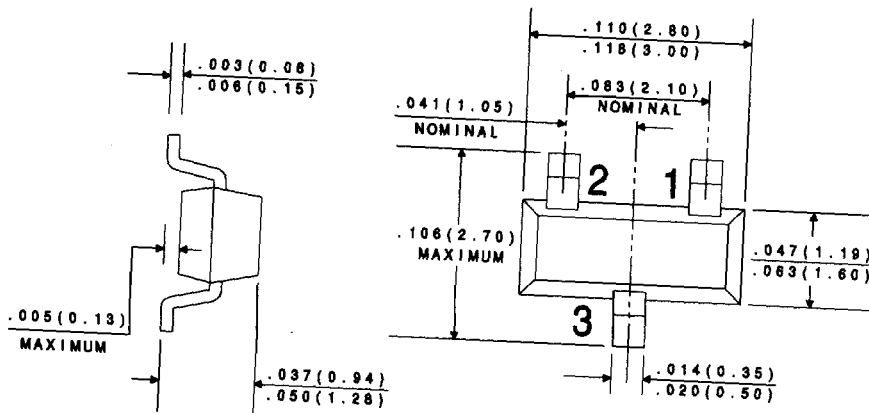
	SYMBOL		UNITS
Collector-Base Voltage	$V_{CB0}$	350	V
Collector-Emitter Voltage	$V_{CEO}$	350	V
Emitter-Base Voltage	$V_{EBO}$	5.0	V
Collector Current	$I_C$	500	mA
Base Current	$I_B$	250	mA
Power Dissipation	$P_D$	350	mW
Operating and Storage			
Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^{\circ}\text{C}$
Thermal Resistance	$\Theta_{JA}$	357	$^{\circ}\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CB0}$	$V_{CB}=250\text{V}$		50	nA
$I_{EBO}$	$V_{EB}=5.0\text{V}$ (CMPT6517)		50	nA
$I_{EBO}$	$V_{EB}=4.0\text{V}$ (CMPT6520)		50	nA
$BV_{CB0}$	$I_C=100\mu\text{A}$	350		V
$BV_{CEO}$	$I_C=1.0\text{mA}$	350		V
$BV_{EBO}$	$I_E=10\mu\text{A}$ (CMPT6517)	6.0		V
$BV_{EBO}$	$I_E=10\mu\text{A}$ (CMPT6520)	5.0		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.30	V
$V_{CE(SAT)}$	$I_C=20\text{mA}, I_B=2.0\text{mA}$		0.35	V
$V_{CE(SAT)}$	$I_C=30\text{mA}, I_B=3.0\text{mA}$		0.50	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		1.0	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.75	V
$V_{BE(SAT)}$	$I_C=20\text{mA}, I_B=2.0\text{mA}$		0.85	V

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$V_{BE(SAT)}$	$I_C=30mA, I_B=3.0mA$		0.90	V
$V_{BE(ON)}$	$V_{CE}=10V, I_C=100mA$		2.0	V
$h_{FE}$	$V_{CE}=10V, I_C=1.0mA$	20		
$h_{FE}$	$V_{CE}=10V, I_C=10mA$	30		
$h_{FE}$	$V_{CE}=10V, I_C=30mA$	30	200	
$h_{FE}$	$V_{CE}=10V, I_C=50mA$	20	200	
$h_{FE}$	$V_{CE}=10V, I_C=100mA$	15		
$f_T$	$V_{CE}=20V, I_C=10mA, f=20MHz$	40	200	MHz
$C_{cb}$	$V_{CB}=20V, I_C=0, f=1.0MHz$		6.0	pF
$C_{eb}$	$V_{EB}=0.5V, I_E=0, f=1.0MHz$ (CMPT6517)		80	pF
$C_{eb}$	$V_{EB}=0.5V, I_E=0, f=1.0MHz$ (CMPT6520)		100	pF

All dimensions in inches (mm).



LEAD CODE:

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

DATA SHEET