Central™
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Manufacturers of World Class Discrete Semiconductors

CPS145 CPS146 NPN
CPS195 CPS196 PNP

HIGH VOLTAGE SILICON TRANSISTORS

JEDEC TO-92 CASE (EBC)

DESCRIPTION

The CENTRAL SEMICONDUCTOR CPS145, CPS195 series types are complementary silicon transistors manufactured by the epitaxial planar process designed for applications requiring extremely high voltage.

MAXIMUM RATINGS ($T_A = 25^oC$)

	SYMBOL	CPS145 CPS195	CPS146 CPS196	UNITS
Collector-Base Voltage	V_{CBO}	500	600	V
Collector-Emitter Voltage	V_{CEO}	500	600	V
Collector Current	I_C	500	500	mA
Power Dissipation	P_D	625		mW
Power Dissipation ($T_C = 25^oC$)	P_D	1.5		W
Operating and Storage Junction Temperature	T_J, T_{stg}	-55 to +150		^oC
Thermal Resistance	ΘJA	0.2		$^oC/mW$
Thermal Resistance	ΘJC	83		$^oC/W$

ELECTRICAL CHARACTERISTICS ($T_A = 25^oC$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	V_{CB} = Rated V_{CBO}		10	μA
I_{CEO}	V_{CE} = 200V		1.0	μA
I_{EBO}	V_{BE} = 6.0V		200	nA
BV_{CEO}	I_C = 1.0mA (CPS145, CPS195)	500		V
BV_{CEO}	I_C = 1.0mA (CPS146, CPS196)	600		V
$V_{CE(SAT)}$	I_C = 20mA, I_B = 2.0mA		0.5	V
$V_{CE(SAT)}$	I_C = 80mA, I_B = 4.0mA (CPS195,CPS196)		3.0	V
$V_{CE(SAT)}$	I_C = 100mA, I_B = 4.0mA (CPS145,CPS146)		3.0	V
$V_{BE(SAT)}$	I_C = 20mA, I_B = 2.0A		0.9	V
h_{FE}	V_{CE} = 10V, I_C = 1.0mA	50		
h_{FE}	V_{CE} = 10V, I_C = 20mA	50	300	
h_{FE}	V_{CE} = 10V, I_C = 80mA	40		
f_T	V_{CE} = 20V, I_C = 10mA, f = 1.0MHz	10		MHz
C_{ob}	V_{CB} = 20V, f = 1.0MHz		30	pF