

Silicon NPN transistor triple diffused type CP896

[Applications]

High voltage switching and amplifier

[Feature]

High voltage $V_{CEO} = 400V$

Low collector saturation voltage $V_{CE(sat)} = 0.5V$ (Max.) at $I_C = 100mA$, $I_B = 10mA$

Small collector output capacitance $C_{ob} = 10pF$ (Max.) at $V_{CB} = 20V$

[Absolute maximum ratings ($T_a = 25C$)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	400	V
Collector-emitter voltage	VCEO	400	V
Emitter-base voltage	VEBO	5	V
Collector current	I_C	500	mA
Junction temperature	T_j	150	C
Storage temperature	T_{stg}	-55 to 150	C

[Electrical characteristics ($T_a = 25C$)]

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BVCBO	400	-	-	V	$I_C = 100\mu A$
Collector-emitter breakdown voltage	BVCEO	400	-	-	V	$I_C = 10mA$
Emitter-base breakdown voltage	BVEBO	5	-	-	V	$I_E = 100\mu A$
Collector cut-off current	I_{CBO}	-	-	100	nA	$V_{CB} = 320V$
Emitter cut-off current	I_{EBO}	-	-	100	nA	$V_{EB} = 4V$
DC current gain 1	h_{FE1}	50	-	-	-	$V_{CE} = 5V$, $I_C = 1mA$
DC current gain 2	h_{FE2}	50	-	-	-	$V_{CE} = 5V$, $I_C = 100mA$
DC current gain 3	h_{FE3}	40	-	-	-	$V_{CE} = 10V$, $I_C = 200mA$
Collector-emitter saturation voltage 1	$V_{CE(sat)1}$	-	-	0.3	V	$I_C = 20mA$, $I_B = 1mA$
Collector-emitter saturation voltage 2	$V_{CE(sat)2}$	-	-	0.25	V	$I_C = 50mA$, $I_B = 5mA$
Collector-emitter saturation voltage 3	$V_{CE(sat)3}$	-	-	0.5	V	$I_C = 100mA$, $I_B = 10mA$
Base-emitter saturation voltage	$V_{BE(sat)}$	-	-	0.9	V	$I_C = 100mA$, $I_B = 10mA$
Base-emitter on voltage	$V_{BE(on)}$	-	-	0.9	V	$V_{CE} = 5V$, $I_C = 100mA$
Transition frequency	f_T	50	-	-	MHz	$V_{CE} = 20V$, $I_E = -20mA$
Collector output capacitance	C_{ob}	-	-	10	pF	$V_{CB} = 20V$, $f = 1MHz$, $I_E = 0A$
Turn on time	t_{on}	-	130	-	ns	$V_{CC} = 100V$, $I_C = 100mA$
Turn off time	t_{off}	-	3300	-	ns	$I_{B1} = 10mA$, $-I_{B2} = 20mA$

Notice 1) These are measured data of transistors assembled by PHENITEC SEMICONDUCTOR Corp. and are for reference only.

Notice 2) The contents described herein are subject to change without notice.

