

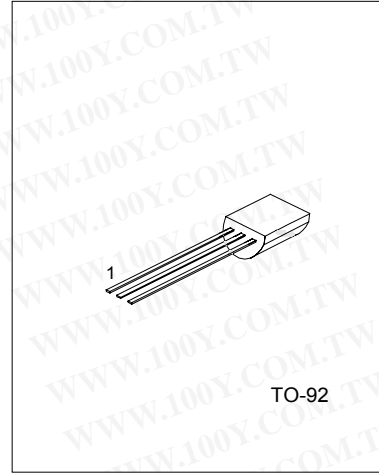
UTC 2N3906

PNP EPITAXIAL PLANAR TRANSISTOR

GENERAL PURPOSE APPLIATION

FEATURES

- *Collector-Emitter Voltage: $V_{CE0}=40V$
- *Collector Dissipation: $P_c(\max)=625mW$
- *Complementary to 2N3904



1:EMITTER 2:BASE 3:COLLECTOR

ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}C$, unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	V_{CB0}	-40	V
Collector-emitter voltage	V_{CE0}	-40	V
Emitter-base voltage	V_{EB0}	-5	V
Collector current	I_c	-200	mA
Base Current	I_B	-50	mA
Collector dissipation	P_c	625	mW
Junction Temperature	T_j	150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 ~ +150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}C$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-off Current	I_{CEX}	$V_{CE}=-30V, V_{EB}=-3V$			-50	nA
Base Cut-off Current	I_{BL}	$V_{CE}=-30V, V_{EB}=-3V$			-50	nA
Collector-base breakdown voltage	V_{CB0}	$I_c=-10\mu A, I_E=0$	-40			V
Collector-emitter breakdown voltage (note)	V_{CE0}	$I_c=-1mA, I_B=0$	-40			V
Emitter-base breakdown voltage	V_{EB0}	$I_E=-10\mu A, I_c=0$	-6			V
DC current gain (note)	h_{FE1}	$V_{CE}=-1V, I_c=-0.1mA$	60			
	h_{FE2}	$V_{CE}=-1V, I_c=-1mA$	80			
	h_{FE3}	$V_{CE}=-1V, I_c=-10mA$	100		300	
	h_{FE4}	$V_{CE}=-1V, I_c=-50mA$	60			
	h_{FE5}	$V_{CE}=-1V, I_c=-100mA$	30			
Collector-emitter saturation voltage (note)	$V_{CE(sat)1}$	$I_c=-10mA, I_B=-1mA$			-0.25	V
	$V_{CE(sat)2}$	$I_c=-50mA, I_B=-5mA$			-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	$I_c=-10mA, I_B=-1mA$	-0.65		-0.85	V
	$V_{BE(sat)2}$	$I_c=-50mA, I_B=-5mA$			-0.95	V
Transition voltage	f_T	$V_{CE}=-20V, I_c=-10mA, f=100MHz$	250			MHz

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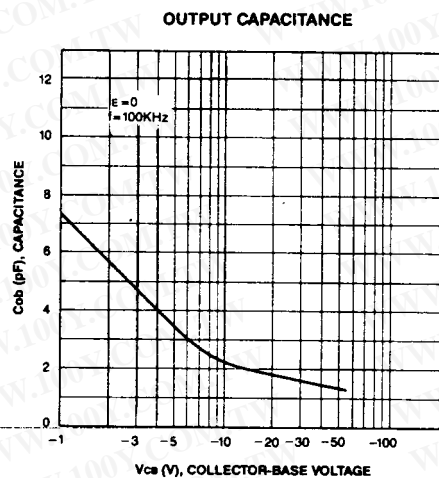
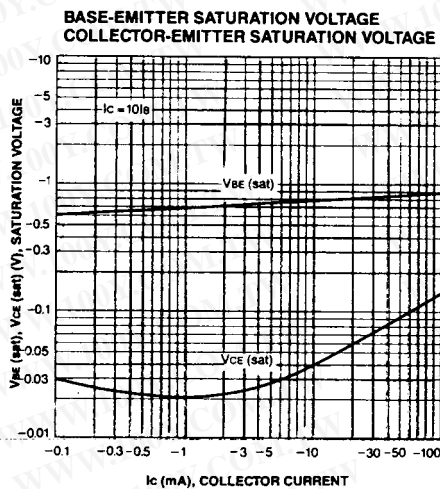
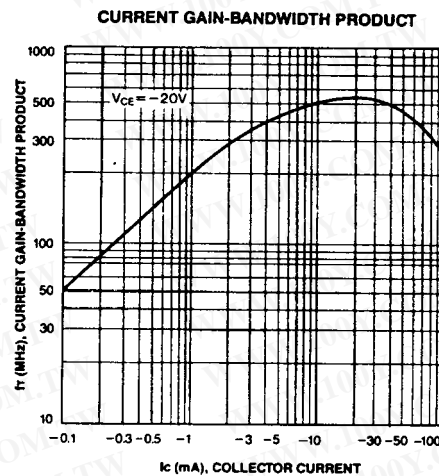
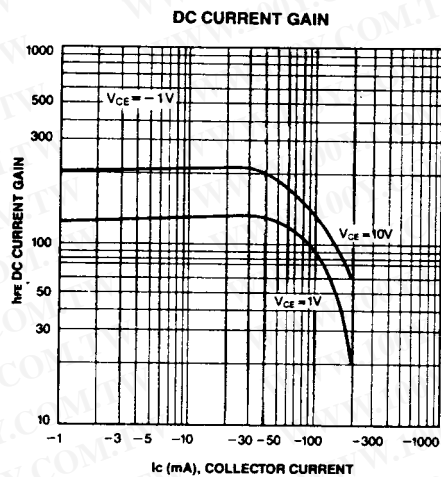
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PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output capacitance	Cob	V _{CB} =-5V, I _E =0, f=1MHz			4.5	pF
Turn on time	t _{ON}	V _{CC} =-3V, V _{BE} =-0.5V, I _C =-10mA, I _{B1} =-1mA			70	ns
Turn off time	t _{OFF}	I _{B1} =I _{B2} =-1mA			300	ns

Note: Pulse test: PW<=300μs, Duty Cycle<=2%



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