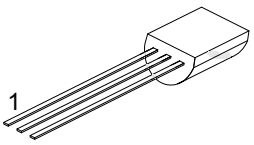
2N3906

PNP EPITAXIAL PLANAR TRANSISTOR

GENERAL PURPOSE APPLIATION



TO-92

■ FEATURES

* Collector-Emitter Voltage: V_{CEO}=40V
* Collector Dissipation: $P_{c(MAX)}$=625mW
* Complementary to UTC 2N3904

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2N3906L-T92-B	2N3906G-T92-B	TO-92	E	B	C	Tape Box
2N3906L-T92-K	2N3906G-T92-K	TO-92	E	B	C	Bulk
2N3906L-T92-R	2N3906G-T92-R	TO-92	E	B	C	Tape Reel

Note: Pin Assignment: E: EMITTER B: BASE C: COLLECTOR

2N3906L-T92-B (1)Packing Type (2)Package Type (3)Lead Free	(1) B: Tape Box, K: Bulk, R: Tape Reel (2) T92: TO-92 (3) G: Halogen Free, L: Lead Free

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■ ABSOLUTE MAXIMUM RATING (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-200	mA
Base Current	I_B	-50	mA
Collector dissipation	P_C	625	mW
Junction Temperature	T_J	125	°C
Operating Temperature	T_{OPR}	-20 ~ +85	°C
Storage Temperature	T_{STG}	-40 ~ +150	°C

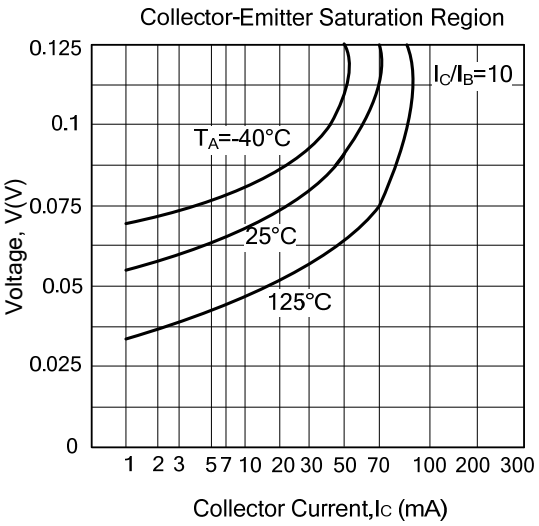
Note: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

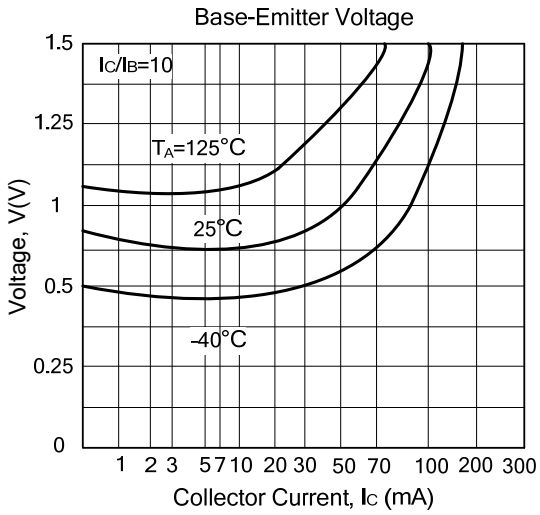
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

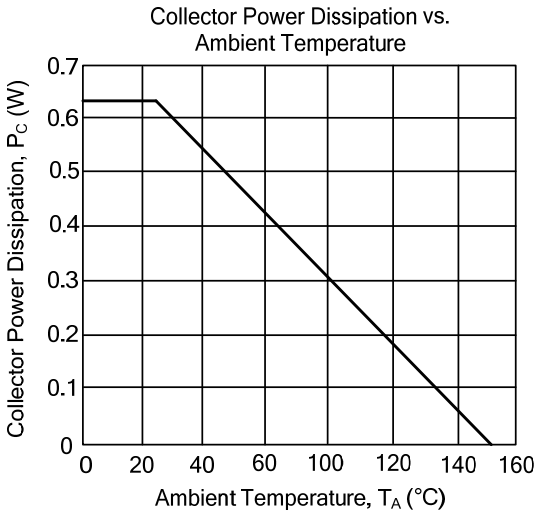
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I_{CEX}	V_{CE}=-30V, V_{EB}=-3V			-50	nA
Base Cut-Off Current	I_{BL}	V_{CE}=-30V, V_{EB}=-3V			-50	nA
Collector-Base Breakdown Voltage	V_{CBO}	I_C=-10μA, I_E=0	-40			V
Collector-Emitter Breakdown Voltage	V_{CEO}	I_C=-1mA, I_B=0 (Note)	-40			V
Emitter-Base Breakdown Voltage	V_{EBO}	I_E=-10μA, 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	
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	
Transition Voltage	f_T	V_{CE}=-20V, I_C=-10mA, f=100MHz	250			MHz
Output Capacitance	C_{OB}	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}=1_{B2}=-1mA			300	ns

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

■ TYPICAL CHARACTERISTICS







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