



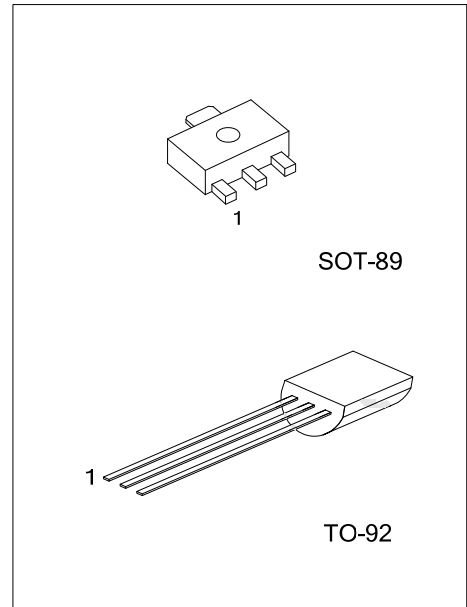
2N3906

PNP EPITAXIAL PLANAR TRANSISTOR

**GENERAL PURPOSE
APPLICATION**

■ **FEATURES**

- * Collector-Emitter Voltage: $V_{CE0}=40V$
- * Complementary to UTC 2N3904



■ **ORDERING INFORMATION**

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
-	2N3906G-AB3-R	SOT-89	B	C	E	Tape Reel
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

Note: Pin Assignment: B: Base C: Collector E: Emitter

<p>2N3906G-AB3-R</p> <p>(1)Packing Type (2)Package Type (3)Green Package</p>	<p>(1) B: Tape Box, K: Bulk, R: Tape Reel (2) AB3: SOT-89, T92: TO-92 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ **MARKING**

SOT-89	TO-92



■ ABSOLUTE MAXIMUM RATING ($T_A=25^{\circ}\text{C}$, 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	SOT-89	P_C	550	mW
	TO-92		625	
Junction Temperature		T_J	125	$^{\circ}\text{C}$
Operating Temperature		T_{OPR}	-20 ~ +85	$^{\circ}\text{C}$
Storage Temperature		T_{STG}	-40 ~ +150	$^{\circ}\text{C}$

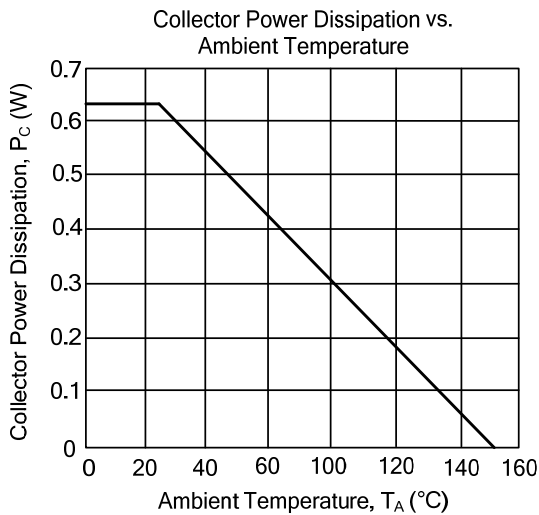
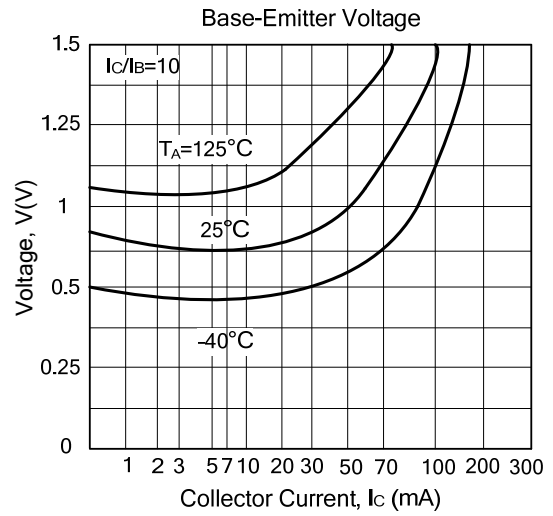
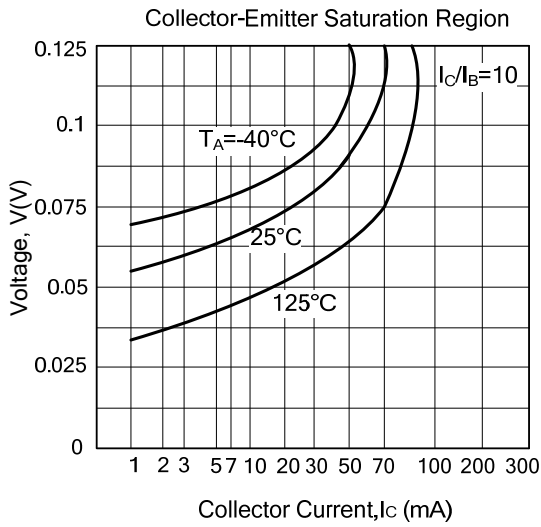
Note: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I_{CEX}	$V_{CE}=-30\text{V}$, $V_{EB}=-3\text{V}$			-50	nA
Base Cut-Off Current	I_{BL}	$V_{CE}=-30\text{V}$, $V_{EB}=-3\text{V}$			-50	nA
Collector-Base Breakdown Voltage	V_{CBO}	$I_C=-10\mu\text{A}$, $I_E=0$	-40			V
Collector-Emitter Breakdown Voltage	V_{CEO}	$I_C=-1\text{mA}$, $I_B=0$ (Note)	-40			V
Emitter-Base Breakdown Voltage	V_{EBO}	$I_E=-10\mu\text{A}$, $I_C=0$	-6			V
DC Current Gain (Note)	h_{FE1}	$V_{CE}=-1\text{V}$, $I_C=-0.1\text{mA}$	60			
	h_{FE2}	$V_{CE}=-1\text{V}$, $I_C=-1\text{mA}$	80			
	h_{FE3}	$V_{CE}=-1\text{V}$, $I_C=-10\text{mA}$	100		300	
	h_{FE4}	$V_{CE}=-1\text{V}$, $I_C=-50\text{mA}$	60			
	h_{FE5}	$V_{CE}=-1\text{V}$, $I_C=-100\text{mA}$	30			
Collector-Emitter Saturation Voltage (Note)	$V_{CE(SAT)1}$	$I_C=-10\text{mA}$, $I_B=-1\text{mA}$			-0.25	V
	$V_{CE(SAT)2}$	$I_C=-50\text{mA}$, $I_B=-5\text{mA}$			-0.4	
Base-Emitter Saturation Voltage	$V_{BE(SAT)1}$	$I_C=-10\text{mA}$, $I_B=-1\text{mA}$	-0.65		-0.85	V
	$V_{BE(SAT)2}$	$I_C=-50\text{mA}$, $I_B=-5\text{mA}$			-0.95	
Transition Voltage	f_T	$V_{CE}=-20\text{V}$, $I_C=-10\text{mA}$, $f=100\text{MHz}$	250			MHz
Output Capacitance	C_{OB}	$V_{CB}=-5\text{V}$, $I_E=0$, $f=1\text{MHz}$			4.5	pF
Turn On Time	t_{ON}	$V_{CC}=-3\text{V}$, $V_{BE}=-0.5\text{V}$, $I_C=-10\text{mA}$, $I_{B1}=-1\text{mA}$			70	ns
Turn Off Time	t_{OFF}	$I_{B1}=I_{B2}=-1\text{mA}$			300	ns

Note: Pulse test: $P_W \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

■ TYPICAL CHARACTERISTICS



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