



2SA1693

Preliminary

PNP EPITAXIAL SILICON TRANSISTOR

SILICON PNP EPITAXIAL PLANAR TRANSISTOR

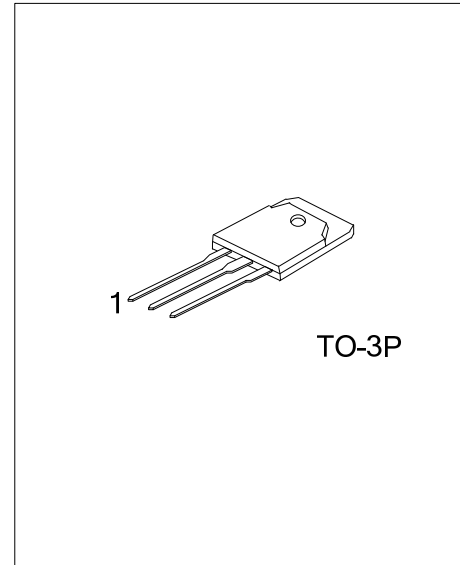
DESCRIPTION

The UTC **2SA1693** is a silicon PNP epitaxial planar transistor, it uses UTC's advanced technology to provide the customers with high DC current gain and high collector-base breakdown voltage, etc.

The UTC **2SA1693** is suitable for audio and general purpose, etc.

FEATURES

- * High DC current gain
- * High collector-base breakdown voltage



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SA1693L-x-T3P-T	2SA1693G-x-T3P-T	TO-3P	B	C	E	Tube

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

<p>2SA1693L-x-T3P-T</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Rank</p> <p>(4) Lead Free</p>	<p>(1) T: Tube</p> <p>(2) T3P: TO-3P</p> <p>(3) x: reference to Classification of h_{FE}</p> <p>(4) L: Lead Free, G: Halogen Free</p>
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■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-80	V
Collector-Emitter Voltage	V_{CEO}	-80	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current	I_C	-6	A
Base Current	I_B	-3	A
Collector Power Dissipation ($T_C=25^\circ\text{C}$)	P_C	60	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ 150	$^\circ\text{C}$

Note: 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.

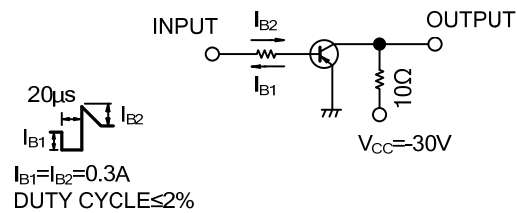
■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-80\text{V}$			-10	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-6\text{V}$			-10	μA
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=-50\text{mA}$	-80			V
DC Current Gain	h_{FE}	$V_{CE}=-4\text{V}$, $I_C=-2\text{A}$	50		180	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=-2\text{A}$, $I_B=-0.2\text{A}$			-1.5	V
Current Gain Bandwidth Product	f_T	$V_{CE}=-12\text{V}$, $I_E=0.5\text{A}$		20		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10\text{V}$, $f=1\text{MHz}$		150		pF
Switching time	Turn-on time	$V_{CC}=-30\text{V}$, $R_L=10\Omega$, $I_C=-3\text{A}$, $I_{B1}=0.3\text{A}$ $I_{B2}=0.3\text{A}$		0.18		μS
	Storage time			1.10		μS
	Fall time			0.21		μS

■ CLASSIFICATION OF h_{FE}

RANK	O	P	Y
RANGE	50~100	70~140	90~180

■ TEST CIRCUIT



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