



UD2195

Preliminary

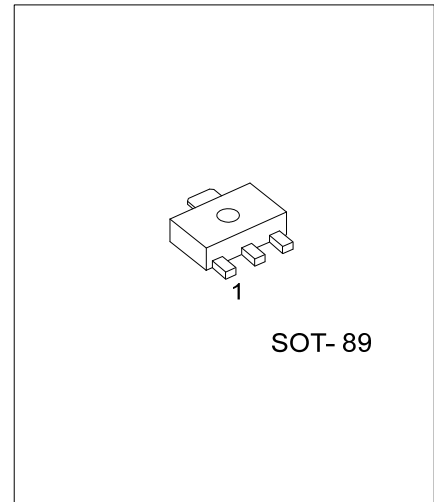
NPN SILICON TRANSISTOR

NPN EPITAXIAL PLANAR TRANSISTOR

DESCRIPTION

* The UTC **UD2195** is designed for use in general purpose amplifier and low speed switching application.

* Pb-free package process is adopted.



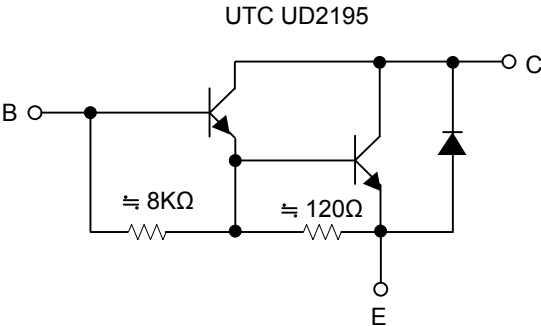
Lead-free: UD2195L
Halogen-free: UD2195G

ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free	Halogen Free		1	2	3	
UD2195-AB3-R	UD2195L-AB3-R	UD2195G-AB3-R	SOT-89	B	C	E	Tape Reel

<p>UD2195L-AB3-R</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Lead Plating</p>	<p>(1) R: Tape Reel</p> <p>(2) AB3: SOT-89</p> <p>(3) G: Halogen Free, L: Lead Free, Blank: Pb/Sn</p>
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■ EQUIVALENT CIRCUIT



B: Base
C: Collector
E: Emitter

■ ABSOLUTE MAXIMUM RATING ($T_a=25^\circ\text{C}$)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	130	V
Collector-Emitter Voltage	V_{CEO}	120	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	DC	4	A
	Pulse(Note 2)	6	
Collector Dissipation	P_C	0.6	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +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.

2. Pulse test: Pulse Width $\leq 350\mu\text{s}$, Duty Cycle $\leq 2\%$

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction-to-Ambient	θ_{JA}	208	$^\circ\text{C/W}$

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu\text{A}$, $I_E=0$	130			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=1\text{mA}$, $I_B=0$	120			V
Base-Emitter Turn-On Voltage	$V_{BE(ON)}$	$V_{CE}=4\text{V}$, $I_C=2\text{A}$			2.8	V
Collector Cutoff Current	I_{CBO}	$V_{CB}=100\text{V}$, $I_E=0$			1	mA
Collector Cutoff Current	I_{CEO}	$V_{CE}=50\text{V}$, $I_B=0$			2	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$			2	mA
ON CHARACTERISTICS						
DC Current Gain (Note)	η_{FE}	$V_{CE}=4\text{V}$, $I_C=1\text{A}$	1000			
		$V_{CE}=4\text{V}$, $I_C=2\text{A}$	500			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=2\text{A}$, $I_B=2\text{mA}$			2	V
SMALL-SIGNAL CHARACTERISTICS						
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}$, $I_E=0\text{A}$, $f=1\text{MHz}$			200	pF

Note: Pulse test: Pulse Width $\leq 380\mu\text{s}$, Duty Cycle $\leq 2\%$

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