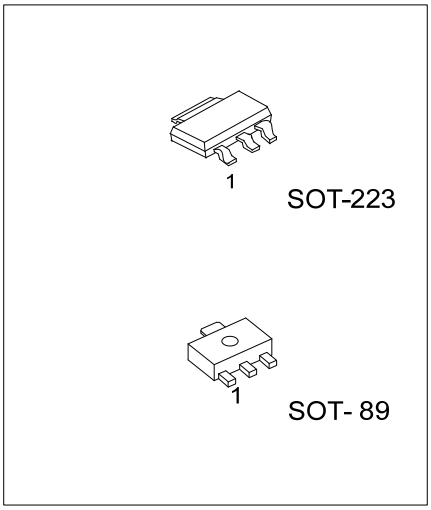
NPN EPITAXIAL PLANAR TRANSISTOR



■ DESCRIPTION

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

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UD2195L-AA3-R	UD2195G-AA3-R	SOT-223	B	C	E	Tape Reel
UD2195L-AB3-R	UD2195G-AB3-R	SOT-89	B	C	E	Tape Reel

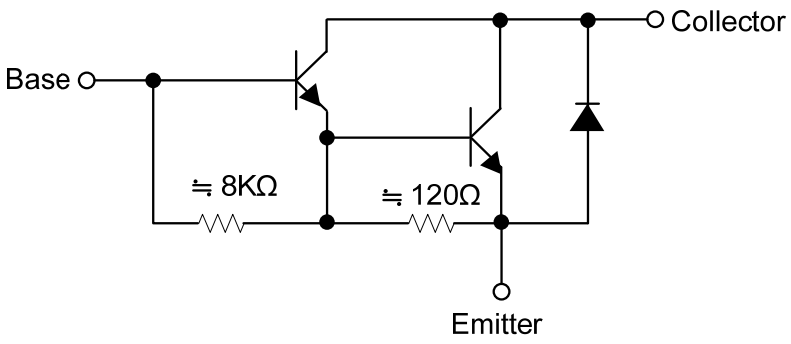
Note: Pin Assignment: B: Base C: Collector E: Emitter

UD2195G-AA3-R (1)Packing Type (2)Package Type (3)Green Package	(1) R: Tape Reel (2) AA3: SOT-223, AB3: SOT-89 (3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

SOT-89	SOT-223
□□□□ UD2195□ 1 Date Code L: Lead Free G: Halogen Free	UD2195□ □□□□ 1 L: Lead Free G: Halogen Free Date Code

■ EQUIVALENT CIRCUIT



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

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	I_C	4	A
	Pulse(Note 2)		6	
Collector Dissipation	SOT-223	P_C	1	W
	SOT-89		0.6	W
Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

Notes: 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≦350μs, Duty Cycle≦2%.

■ THERMAL CHARACTERISTICS

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	SOT-223	θ_{JA}	125	°C/W
	SOT-89		208	°C/W

Note: Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper plate.

■ ELECTRICAL CHARACTERISTICS

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

Note: Pulse test: Pulse Width≦380μs, Duty Cycle≦2%