



TC200

Preliminary

NPN EPITAXIAL SILICON TRANSISTOR

EPITAXIAL PLANAR NPN TRANSISTOR

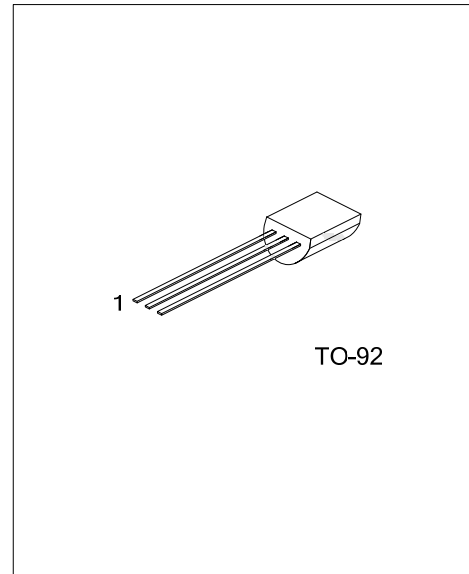
DESCRIPTION

The UTC **TC200** is an epitaxial planar NPN transistor; it uses UTC's advanced technology to provide the customers with high DC current gain and low collector-emitter saturation voltage, etc.

The UTC **TC200** is suitable for general purpose and switching application, etc.

FEATURES

- * High DC current gain
- * Low Collector-Emitter Saturation Voltage



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TC200L-x-T92-B	TC200G-x-T92-B	TO-92	E	C	B	Tape Box
TC200L-x-T92-K	TC200G-x-T92-K	TO-92	E	C	B	Bulk

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

<p>TC200L-x-T92-B</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Halogen Free</p>	<p>(1) B: Tape Box, K: Bulk (2) T92: TO-92 (3) refer to CLASSIFICATION OF h_{FE1} (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}	60	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	500	mA
Emitter Current	I_E	-500	mA
Collector Power Dissipation	P_C	625	mW
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}	$V_{CB}=50\text{V}, I_E=0$			0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			0.1	μA
DC Current Gain	h_{FE1}	$V_{CE}=2\text{V}, I_C=50\text{mA}$	70		240	
	h_{FE2}	$V_{CE}=2\text{V}, I_C=200\text{mA}$	25			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=10\text{mA}$			0.25	V
Base-Emitter Voltage	V_{BE}	$V_{CE}=2\text{V}, I_C=200\text{mA}$			1.0	V
Current Gain Bandwidth Product	f_T	$V_{CE}=6\text{V}, I_C=20\text{mA}$		300		MHz
Output Capacitance	C_{ob}	$V_{CB}=6\text{V}, I_E=0, f=1\text{MHz}$		7.0		pF

■ CLASSIFICATION OF h_{FE1}

RANK	O	Y
h_{FE1}	70 ~ 140	120 ~ 240

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