



BD135

Preliminary

NPN EPITAXIAL SILICON TRANSISTOR

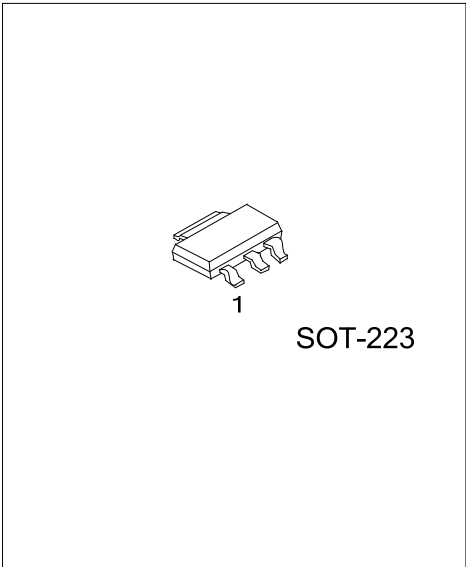
NPN EPITAXIAL TRANSISTOR

DESCRIPTION

The UTC **BD135** is an NPN epitaxial transistor; it uses UTC's advanced technology to provide the customers with high DC current gain, etc.

FEATURES

* high DC current gain



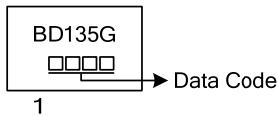
ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
BD135G-xx-AA3-R	SOT-223	B	C	E	Tape Reel

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

<p>BD135G-xx-AA3-R</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Rank (4) Green Package 	<ul style="list-style-type: none"> (1) R: Tape Reel, K: Bulk (2) AA3: SOT-223, T60: TO-126 (3) refer to CLASSIFICATION OF h_{FE3} (4) G: Halogen Free and Lead Free, L: Lead Free
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MARKING



■ ABSOLUTE MAXIMUM RATINGS ($T_C=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	45	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	1.5	A
Collector Current (Pulse)	I_{CP}	3.0	A
Base Current	I_B	0.5	A
Collector Power Dissipation	P_C	12.5	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 ($T_C=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Saturation Voltage	$V_{CEO(SUS)}$	$I_C=30\text{mA}, I_B=0$	45			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30\text{V}, I_E=0$			0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			10	μA
DC Current Gain	h_{FE1}	$V_{CE}=2\text{V}, I_C=5\text{mA}$	25			
	h_{FE2}	$V_{CE}=2\text{V}, I_C=0.5\text{A}$	25			
	h_{FE3}	$V_{CE}=2\text{V}, I_C=150\text{mA}$	40		250	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			0.5	V
Base-Emitter ON Voltage	V_{BE_ON}	$V_{CE}=2\text{V}, I_C=0.5\text{A}$			1	V

Note: Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.

■ h_{FE3} CLASSIFICATION

CLASSIFICATION	6	10	16
h_{FE3}	40 ~ 100	63 ~ 160	100 ~ 250

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