



**BD238**

**PNP EPITAXIAL SILICON TRANSISTOR**

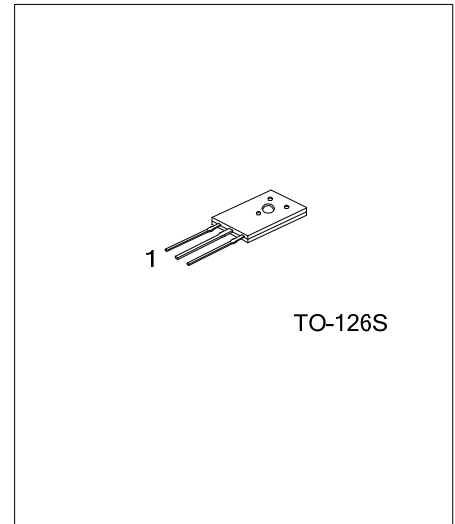
**-80V, PNP TRANSISTOR**

■ DESCRIPTION

The UTC **BD238** is a PNP epitaxial planar transistor, it uses UTC's advanced technology to provide the customers with high DC current gain and high collector-emitter breakdown voltage, etc.

■ FEATURES

- \* High DC current gain
- \* High collector-emitter breakdown voltage



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BD238L-T6S-K	BD238G-T6S-K	TO-126S	E	C	B	Bulk

<p>BD238L-T6S-K</p> <p>(1) Packing Type (2) Package Type (3) Lead Free</p>	<p>(1) K: Bulk (2) T6S: TO-126S (3) L: Lead Free, G: Halogen Free</p>
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■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

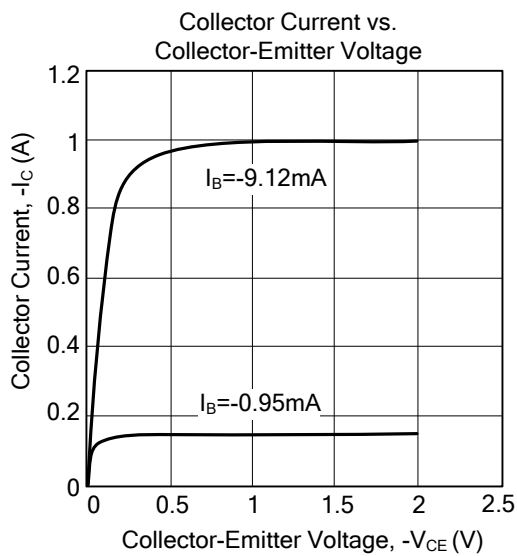
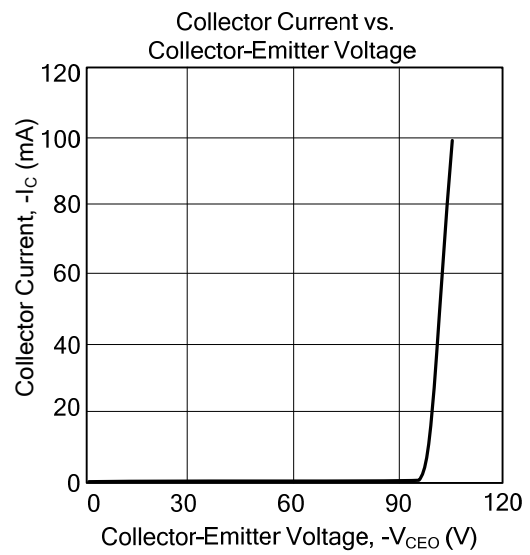
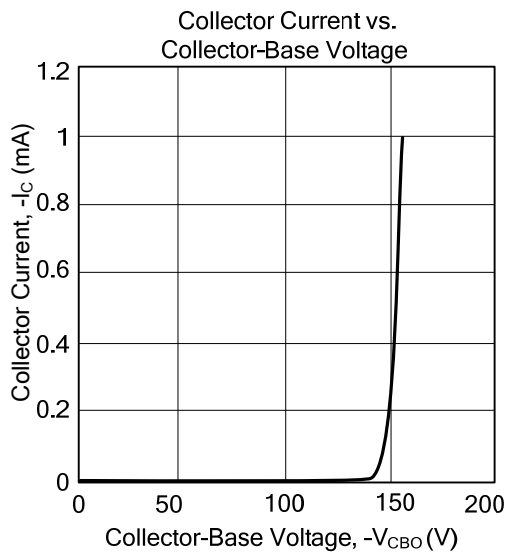
PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	$V_{CBO}$	-100	V
Collector-Emitter Voltage	$V_{CEO}$	-80	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-2	A
Collector Power Dissipation	$P_C$	1.25	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55~150	$^\circ\text{C}$

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 ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-1\text{mA}, I_E=0$	-100			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-100\text{mA}, I_B=0$	-80			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_C=-1\text{mA}, I_E=0$	-5			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-100\text{V}, I_E=0$			-100	$\mu\text{A}$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=-5\text{V}, I_C=0$			-1	mA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-2\text{V}, I_C=-150\text{mA}$	40			
	$h_{FE(2)}$	$V_{CE}=-2\text{V}, I_C=-1\text{A}$	25			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-1\text{A}, I_B=-100\text{mA}$			-0.6	V
Transition Frequency	$f_T$	$V_{CE}=-10\text{V}, I_C=-250\text{mA}, f=10\text{MHz}$	3			MHz

## ■ TYPICAL CHARACTERISTICS



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