



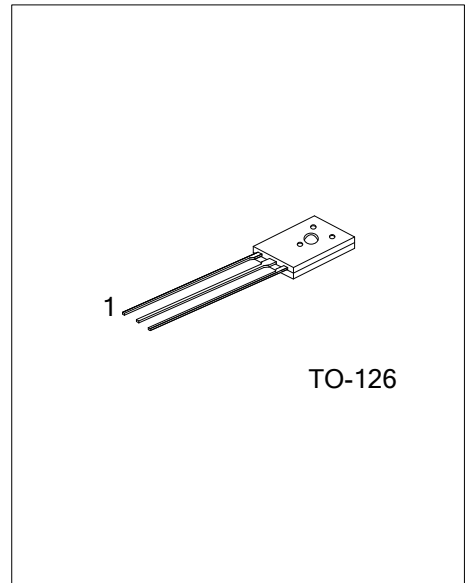
BD137

NPN SILICON TRANSISTOR

NPN POWER TRANSISTORS

■ FEATURES

- * High current (max.1.5A)
- * Low voltage (max.60V)



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BD137L-xx-T60-K	BD137G-xx-T60-K	TO-126	E	C	B	Bulk

<p>BD137L-xx-T60-K</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Lead Plating</p>	<p>(1) K: Bulk (2) T60: TO-126 (3) refer to CLASSIFICATION OF h_{FE} (4) L: Lead Free, G: Halogen Free</p>
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■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	1.5	A
Peak Collector Current	I_{CM}	3.0	A
Peak Base Current	I_{BM}	0.5	A
Power Dissipation ($T_A=25^\circ\text{C}$)	P_D	1.25	W
Junction Temperature	T_J	+150	$^\circ\text{C}$
Operating Temperature	T_{OPR}	-55~+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 ($T_J=25^\circ\text{C}$, unless otherwise specified)

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Voltage (Note)		V_{CEO}	$I_C=30\text{mA}$, $I_B=0$	60			V
Collector Cut-Off Current		I_{CBO}	$I_E=0$, $V_{CB}=30\text{V}$			100	nA
			$I_E=0$, $V_{CB}=30\text{V}$, $T_J=125^\circ\text{C}$			10	μA
Emitter Cut-Off Current		I_{EBO}	$I_C=0$, $V_{EB}=5\text{V}$			10	μA
DC Current Gain (Note)		h_{FE}	$V_{CE}=2\text{V}$	$I_C=5\text{mA}$	25		
				$I_C=150\text{mA}$	40		160
				$I_C=500\text{mA}$	25		
DC Current Gain (Note)	BD137-6	h_{FE}	$I_C=150\text{mA}$, $V_{CE}=2\text{V}$		40		100
	BD137-10				63		160
Collector-Emitter Saturation Voltage (Note)		$V_{CE(SAT)}$	$I_C=500\text{mA}$, $I_B=50\text{mA}$			0.5	V
Base-Emitter Voltage (Note)		V_{BE}	$I_C=500\text{mA}$, $V_{CE}=2\text{V}$			1	V
Transition Frequency		f_T	$I_C=500\text{mA}$, $V_{CE}=5\text{V}$, $f=100\text{MHz}$		190		MHz

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

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