

UTC HLB124 NPN EPITAXIAL SILICON TRANSISTOR

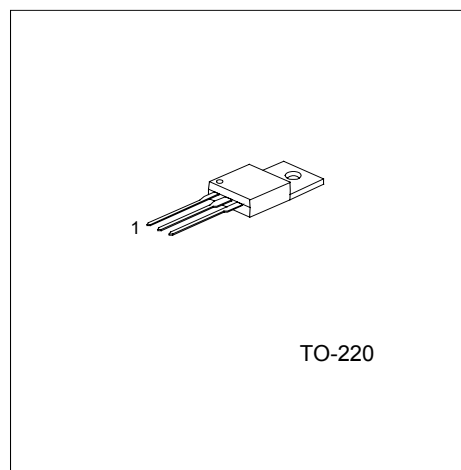
NPN EPITAXIAL PLANAR TRANSISTOR

DESCRIPTION

The UTC HLB124 is designed for high voltage, high speed switching inductive circuits, and amplifier applications.

FEATURES

- * High Speed Switching
- * Low Saturation Voltage
- * High Reliability



1: BASE 2: COLLECTOR 3: EMITTER

*Pb-free plating product number: HLB124L

ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	600	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	8	V
Collector Current (DC)	I_C	2	A
Collector Current (PULSE)	I_{CP}	4	A
Base Current (DC)	I_B	1	A
Base Current (PULSE)	I_{BP}	2	A
Total Power Dissipation (Tc=25°C)	P_c	35	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-40 ~ +150	°C

ELECTRICAL CHARACTERISTICS

(Ta=25°C, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = 1mA$	600			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = 10mA$	400			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = 1mA$	8			V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 600V$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 9V, I_C = 0$			10	μA
C-E Saturation Voltage	* $V_{CE(sat)1}$	$I_C = 0.1A, I_B = 10mA$			0.3	V
	* $V_{CE(sat)2}$	$I_C = 0.3A, I_B = 30mA$			0.8	V
B-E Saturation Voltage	* $V_{BE(sat)1}$	$I_C = 0.1A, I_B = 10mA$			0.9	V
	* $V_{BE(sat)2}$	$I_C = 0.3A, I_B = 30mA$			1.2	V
DC Current Gain	* h_{FE1}	$V_{CE} = 5V, I_C = 0.3A$	10		40	
	* h_{FE2}	$V_{CE} = 5V, I_C = 0.5A$	10			
	* h_{FE3}	$V_{CE} = 5V, I_C = 1A$	6			
Gain-Bandwidth Product	f_T	$V_{CE} = 10V, I_C = 0.3A, f=1MHz$	15			MHz

*Pulse Test : Pulse Width ≤ 380μs, Duty Cycle ≤ 2%

CLASSIFICATION OF HFE1

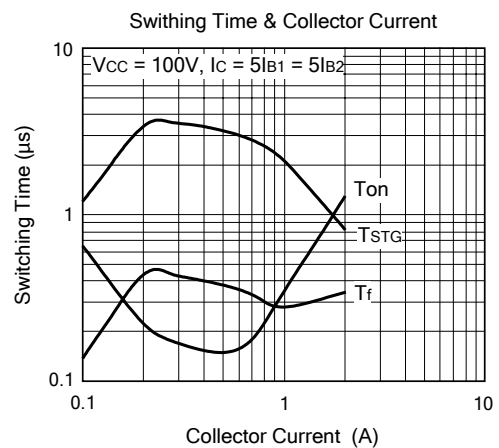
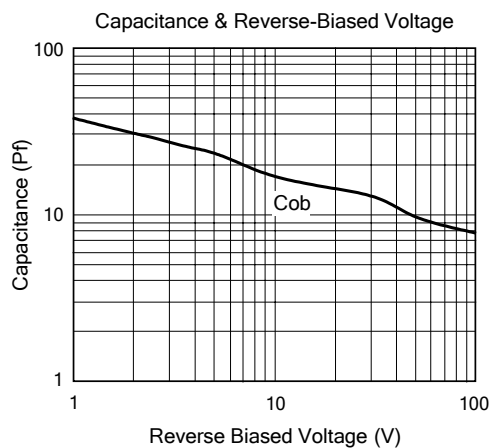
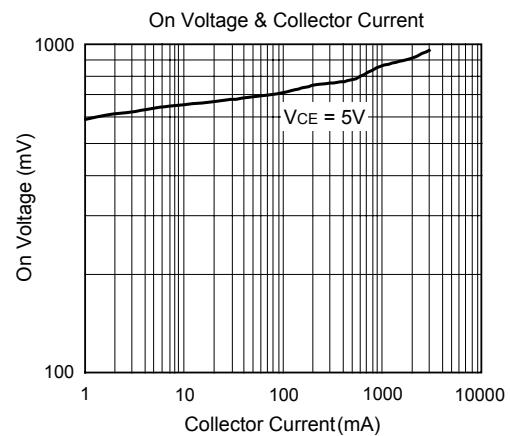
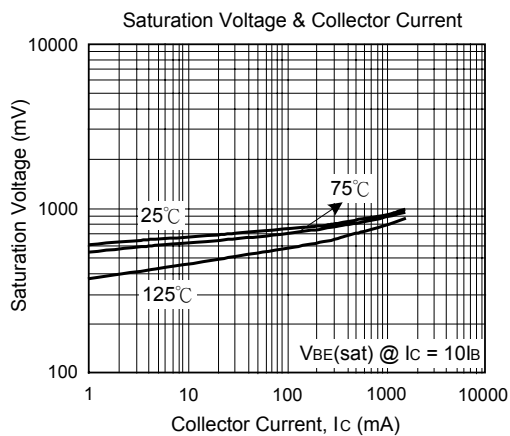
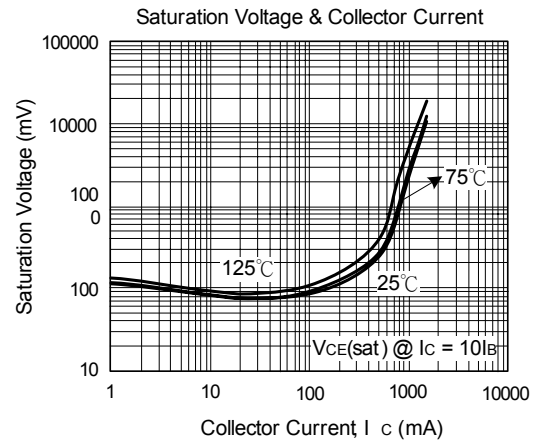
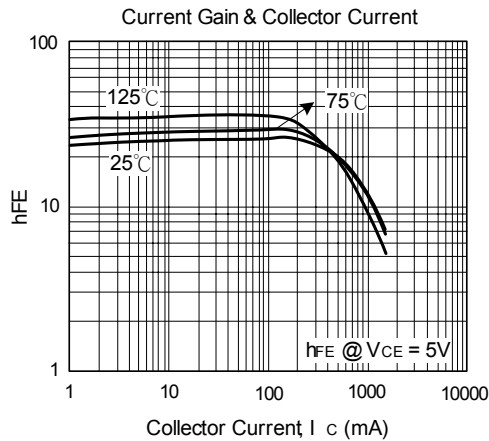
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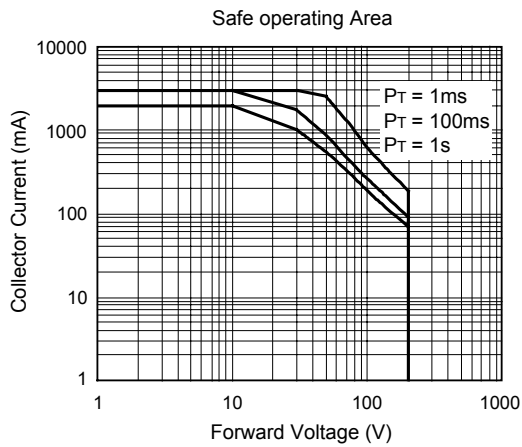
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RANK	B1	B2	B3	B4	B5	B6
Range	10 ~ 17	13 ~ 22	18 ~ 27	23 ~ 32	28 ~ 37	33 ~ 40

CHARACTERISTICS CURVE



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