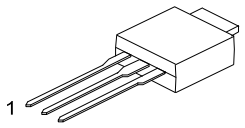
ULB121

NPN SILICON TRANSISTOR

NPN TRIPLE DIFFUSED PLANAR TYPE HIGH VOLTAGE TRANSISTOR



TO-251

■ DESCRIPTION

The UTC **ULB121** is a medium power transistor designed for use in switching applications.

■ FEATURES

* High breakdown voltage
* Low collector saturation voltage
* Fast switching speed
* Halogen Free

■ ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
ULB121G-TM3-T	TO-251	B	C	E	Tube

ULB121G-TM3-T (1) Packing Type (2) Package Type (3) Halogen Free	(1) T: Tube (2) TM3: TO-251 (3) G: Halogen Free

■ ABSOLUTE MAXIMUM RATING (T_A=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}	6	V
Collector Current	DC	I_C	300	mA
	Pulse		600	mA
Base Current	DC	I_B	40	mA
	Pulse		100	mA
Total Power Dissipation (T_C=25°C)		P_D	10	W
Junction Temperature		T_J	150	°C
Storage Temperature		T_{STG}	-40 ~ +150	°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.

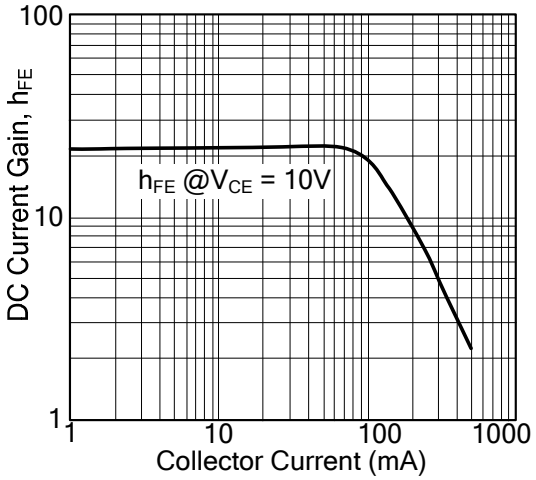
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=100μA	600			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=10mA	400			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=10μA	6			V
Collector Cutoff Current	I_{CBO}	V_{CB}=550V			10	μA
Collector Cutoff Current	I_{CEO}	V_{CB}=400V			10	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=6V			10	μA
ON CHARACTERISTICS						
DC Current Gain(Note)	h_{FE1}	V_{CE}=10V, I_C=10mA	8			
	h_{FE2}	V_{CE}=10V, I_C=50mA	10		36	
Collector-Emitter Saturation Voltage (Note)	$V_{CE(SAT)}$	I_C=50mA, I_B=10mA			400	mV
		I_C=100mA, I_B=20mA			750	
Base-Emitter Saturation Voltage (Note)	$V_{BE(SAT)}$	I_C=50mA, I_B=10mA			1	V

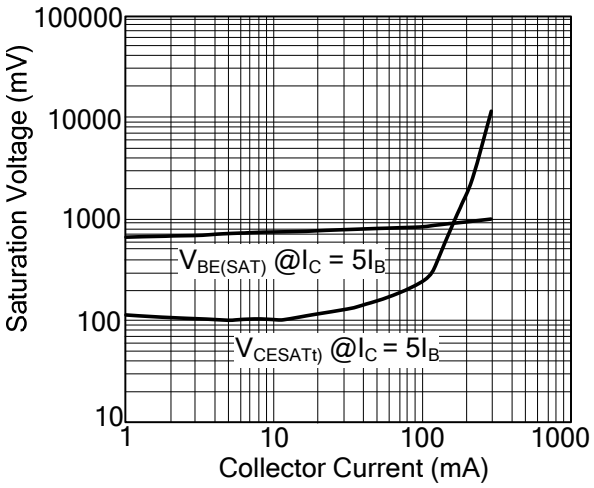
Note: Pulse Test : Pulse Width ≤380μs, Duty Cycle≤2%

■ TYPICAL CHARACTERISTICS

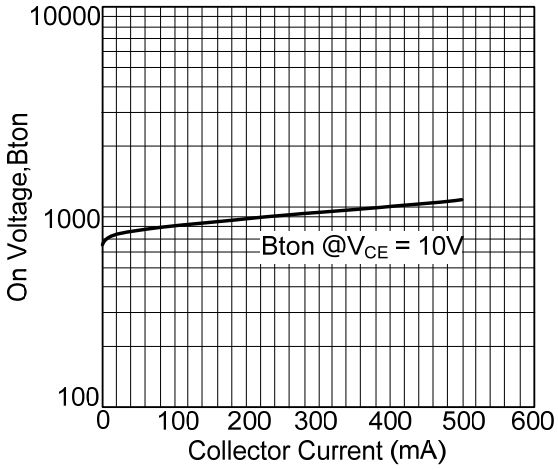
DC Current Gain & Collector Current



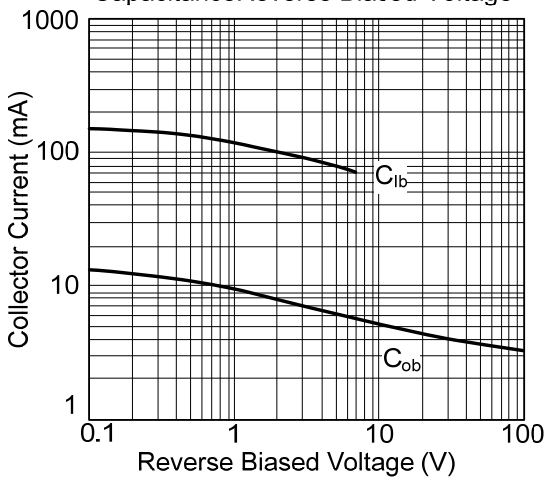
Saturation Voltage & Collector Current



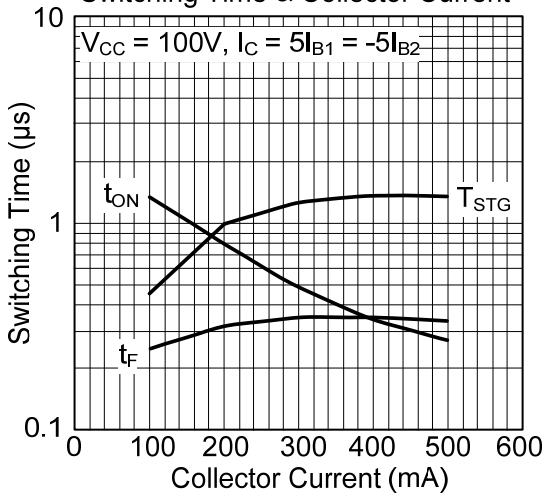
On Voltage & Collector Current



CapacitanceReverse Biased Voltage



Switching Time & Collector Current



Safe Operating Area