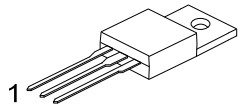
TUL1203

NPN SILICON TRANSISTOR

HIGH VOLTAGE FAST-SWITCHING NPN POWER TRANSISTOR



TO-220

■ DESCRIPTION

The **TUL1203** is manufactured by using high voltage Planar technology for high voltage capability and high switching speeds.

■ FEATURES

* BV_{CES} Up To 1400V.
* Better Distribution Of Dynamic Parameters And Lot To Lot Spread
* High Switching Speed

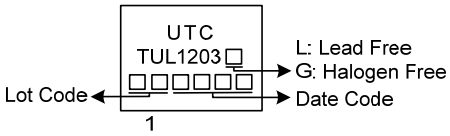
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free Plating	Halogen-Free		1	2	3	
TUL1203L-TA3-T	TUL1203G-TA3-T	TO-220	B	C	E	Tube

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

TUL1203G-TA3-T (1)Packing Type (2)Package Type (3)Green Package	(1) T: Tube (2) TA3: TO-220 (3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage (I_E = 0)	V_{CBO}	1400	V
Collector-Emitter Voltage (V_{BE} = 0)	V_{CES}	1400	V
Collector-Emitter Voltage (I_B = 0)	V_{CEO}	550	V
Emitter-Base Voltage (I_C = 0)	V_{EBO}	12	V
Collector Current	I_C	5	A
Collector Peak Current (t_p <5 ms)	I_{CM}	8	A
Base Current	I_B	2	A
Base Peak Current (t_p <5 ms)	I_{BM}	4	A
Power Dissipation (T_C = 25°C)	P_D	100	W
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-65 ~ +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.

■ THERMAL DATA

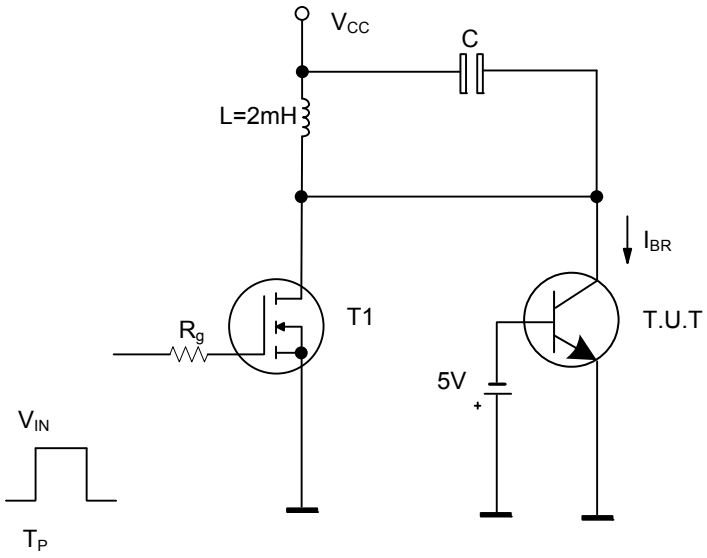
PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Case	θ_{JC}	1.25	°C /W

■ ELECTRICAL CHARACTERISTICS (T_c = 25°C unless otherwise specified)

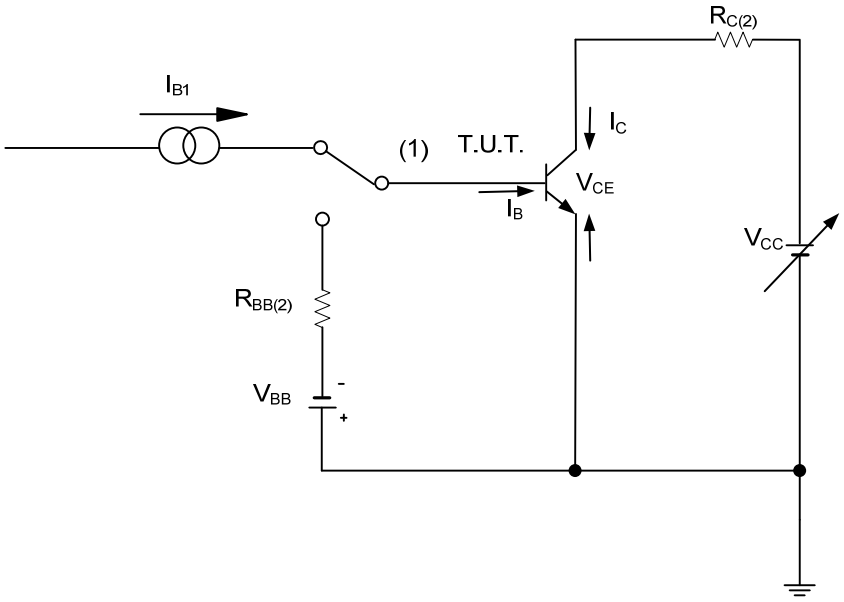
PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-off Current (V_{BE} = 0)		I_{CES}	V_{CE}=1400V			100	μA
Emitter Cut-off Current (I_B = 0)		I_{EBO}	V_{EB}=12V			100	μA
Collector-Emitter Sustaining Voltage (I_B = 0) (Note)		$V_{CEO(SUS)}$	I_C=100mA	550			V
Collector-Emitter Saturation Voltage (Note)		$V_{CE(SAT)}$	I_C=1A, I_B=200mA			0.5	V
			I_C=2A, I_B=400mA			0.7	V
			I_C=3A, I_B=1A			1.5	V
Base-Emitter Saturation Voltage (Note)		$V_{BE(SAT)}$	I_C=2A, I_B=400mA			1.5	V
			I_C=3A, I_B=1A			1.5	V
DC Current Gain (Note)		h_{FE}	I_C=1mA, V_{CE}=5V	10			
			I_C=10mA, V_{CE}=5V	10			
			I_C=0.8A, V_{CE}=3V	14		32	
			I_C=2A, V_{CE}=5V	9		28	
Resistive Load	Storage Time	t_S	I_C=2A, V_{CC}=150V I_{B1}=0.4A, I_{B2}=-0.8A, T_P=30μs		2.5	3.0	μs
	Fall Time	t_F			0.2	0.3	μs
Avalanche Energy		E_{AR}	L=2mH,C=1.8nF I_{BR}≤2.5A,25°C<T_C<125°C	6			mJ

Note: Pulse Test: Pulse width = 300μs, Duty cycle≤1.5%

■ TEST CIRCUITS



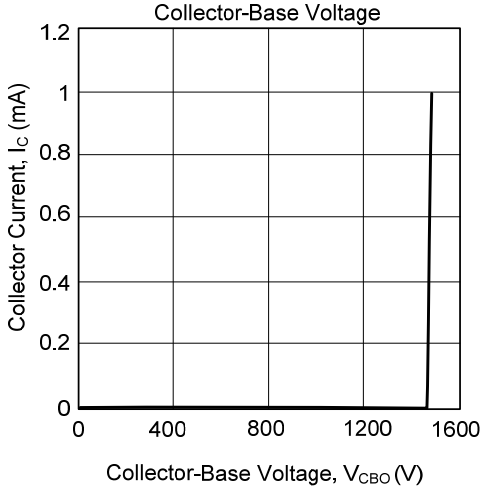
Energy Rating Test Circuit



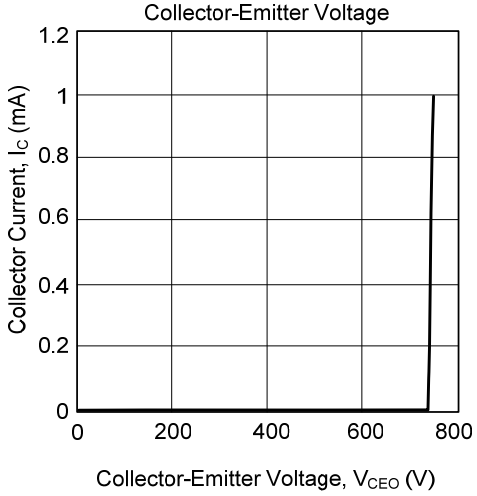
Resistive Load Switching Test Circuit

■ TYPICAL CHARACTERISTICS

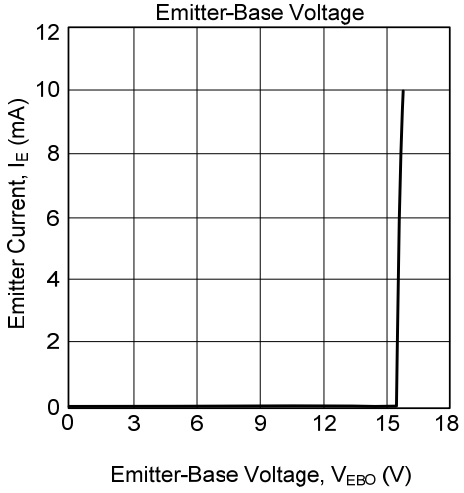
Collector Current vs. Collector-Base Voltage



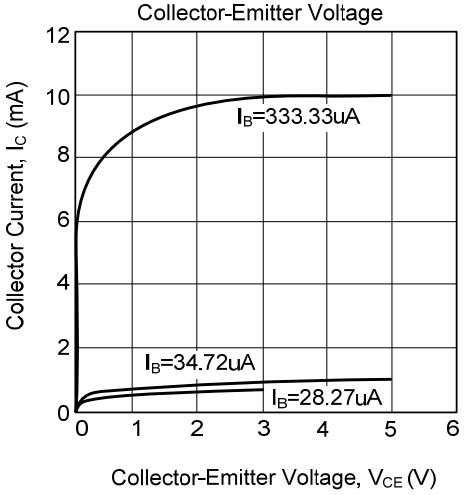
Collector Current vs. Collector-Emitter Voltage



Emitter Current vs. Emitter-Base Voltage



Collector Current vs. Collector-Emitter Voltage



单击下面可查看定价，库存，交付和生命周期等信息

>>UTC(友顺)