



T2096

NPN SILICON TRANSISTOR

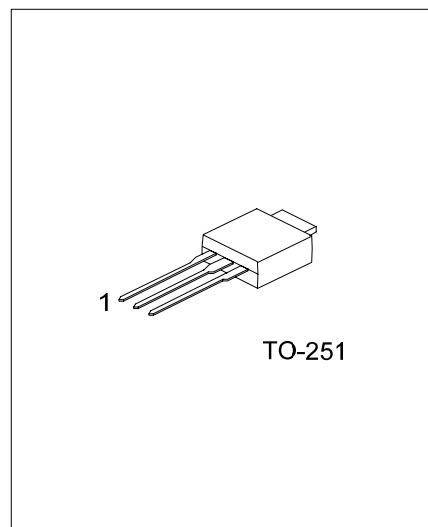
HIGH VOLTAGE TRANSISTOR

DESCRIPTION

The T2096 is a NPN Silicon Planar Transistors in TO-251 package. It is intended for high voltage, switching power supply and industrial applications.

FEATURES

- * Pb-free package is available
- * Collector-Emitter voltage: $V_{CE0} = 400V$
- * Pulse collector current to 4A



*Pb-free plating product number: T2096L

ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
T2096-TM3-T	T2096L-TM3-T	TO-251	B	C	E	Tube

T2096L-TM3-T (1)Packing Type (2)Pin Assignment (3)Package Type (4)Lead Plating	(1) T: Tube (2) refer to Pin Assignment (3) TM3: TO-251 (4) L: Lead Free Plating, Blank: Pb/Sn
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■ ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V _{CBO}	800	V
Collector-Emitter Voltage		V _{CES}	800	V
Collector-Emitter Voltage		V _{CEO}	400	V
Emitter-Base Voltage		V _{EBO}	8	V
Base Current		I _B	1	A
DC Collector Current		I _C	2	A
Pulse Collector Current (Note 2)		I _{CP}	4	A
Collector Dissipation	Ta=25℃	P _C	1	W
	Tc=25℃		15	
Junction Temperature		T _J	150	℃
Storage Temperature		T _{STG}	-55 ~ +150	℃

Note: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

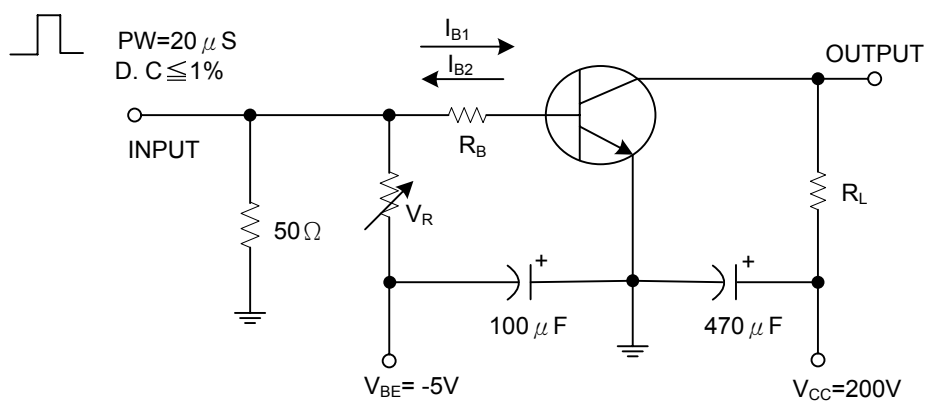
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. Pulse Test: Pulse Width ≤300μS, Duty Cycle ≤10%

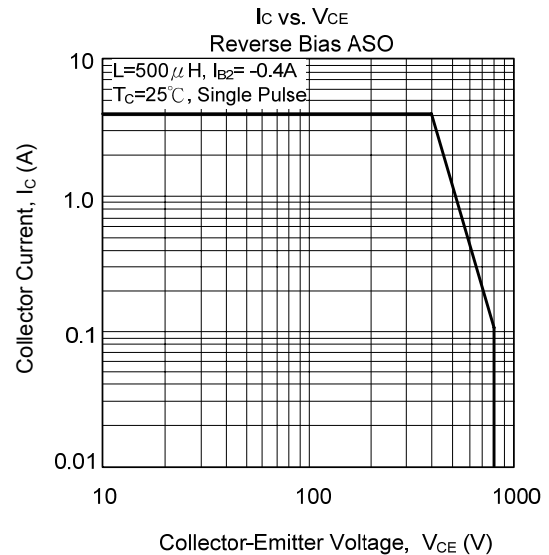
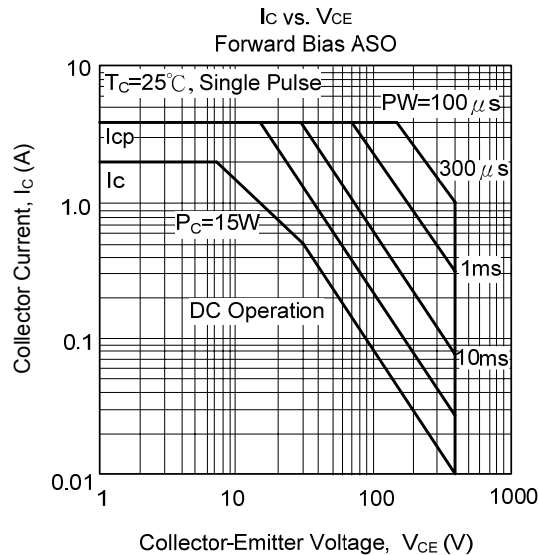
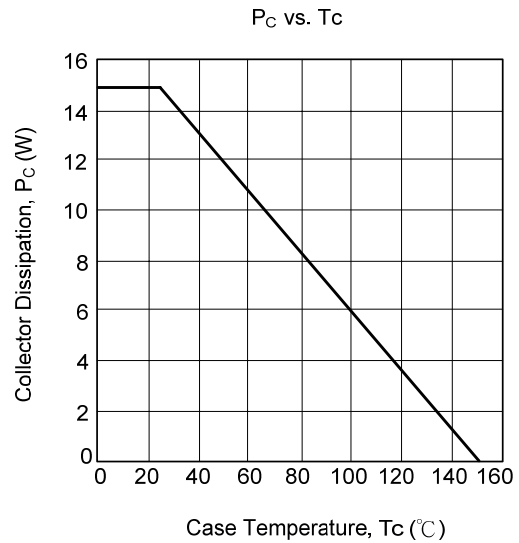
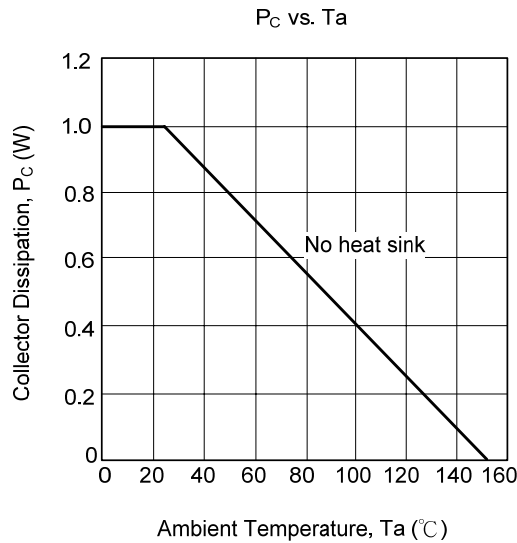
■ ELECTRICAL CHARACTERISTICS (Ta = 25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV _{CBO}	I _C = 1mA, I _E = 0	800			V
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C = 5mA, R _{BE} = ∞	400			V
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E = 1mA, I _C = 0	8			V
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C = 1A, I _B = 0.2A			0.8	V
Base-Emitter Saturation Voltage	V _{BE(SAT)}	I _C = 1A, I _B = 0.2A			1.5	V
Collector Cutoff Current	I _{CBO}	V _{CB} = 400V, I _E = 0			10	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = 5V, I _C = 0			10	μA
DC Current Gain	h _{FE1}	V _{CE} = 5V, I _C = 1mA	45			
	h _{FE2}	V _{CE} = 5V, I _C = 0.2A	120		180	
Current Gain-Bandwidth Product	f _T	V _{CE} = 10V, I _C = 0.2A		20		MHz
Output Capacitance	C _{ob}	V _{CB} = 10V, f = 1MHz		20		pF
Turn-on Time	t _{ON}	I _C = 1.0A, I _{B1} = 0.05A I _{B2} = -0.5A, R _L = 200Ω V _{CC} = 200V			0.5	μs
Storage Time	t _{STG}				2.5	μs
Fall Time	t _F				0.3	μs

■ SWITCHING TIME TEST CIRCUIT



■ TYPICAL CHARACTERISTICS



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