



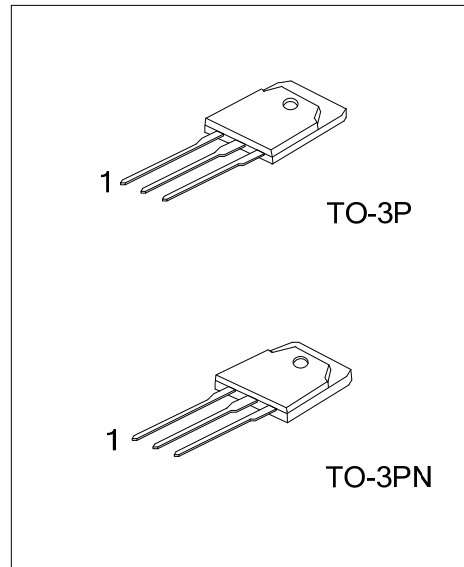
2SC3320

NPN EPITAXIAL SILICON TRANSISTOR

HIGH VOLTAGE HIGH SPEED SWITCHING

■ FEATURES

- * High voltage, high speed switching
- * High reliability



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC3320L-x-T3P-T	2SC3320L-x-T3P-T	TO-3P	B	C	E	Tube
2SC3320L-x-T3N-T	2SC3320L-x-T3N-T	TO-3PN	B	C	E	Tube

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

<p>2SC3320L-x-T3P-T</p>	<p>(1) T: Tube (2) T3P: TO-3P, T3N: TO-3PN (3) x: reference to Classification of h_{FE} (4) L: Lead Free, G: Halogen Free</p>
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■ MARKING INFORMATION

PACKAGE	MARKING
TO-3P TO-3PN	

■ ABSOLUTE MAXIMUM RATINGS (T_c = 25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector Base Voltage	V _{CBO}	500	V
Collector Emitter Voltage	V _{CEO}	400	V
	V _{CEO(SUS)}	400	V
Emitter Base Voltage	V _{EBO}	7	V
Collector Current	I _C	15	A
Base Current	I _B	5	A
Power Dissipation	P _D	80	W
Junction Temperature	T _J	+150	°C
Storage Temperature	T _{STG}	-40 ~ +150	°C

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.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Case	θ _{JC}	1.55	°C/W

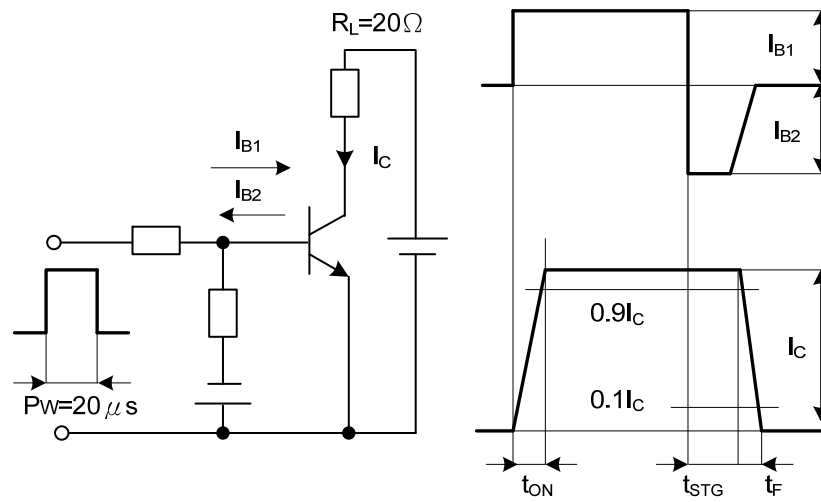
■ ELECTRICAL SPECIFICATIONS (T_c=25°C, Unless Otherwise Specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Voltage	V _{CBO}	I _{CBO} =1mA	500			V
Collector Emitter Voltage	V _{CEO}	I _{CEO} =10mA	400			V
	V _{CEO(SUS)}	I _C =0.2A	400			V
Emitter Base Voltage	V _{EBO}	I _{EBO} =1mA	7			V
Collector Emitter Saturation Voltage	V _{CE(SAT)}	I _C =6A, I _B =1.2A			1	V
Base Emitter Saturation Voltage	V _{BE(SAT)}				1.5	V
Collector Cut-off Current	I _{CBO}	V _{CBO} =500V			1	mA
Emitter Cut-off Current	I _{EBO}	V _{EBO} =7V			1	mA
DC Current Gain	h _{FE}	I _C =6A, V _{CE} =5V	10		45	
Switching Time	t _{ON}	I _C =7.5A, I _{B1} =1.5A, I _{B2} =-3A R _L =20Ω, P _W =20μs, Duty ≤ 2%			0.5	μs
	t _{STG}				1.5	μs
	t _F				0.15	μs

■ CLASSIFICATION OF h_{FE}

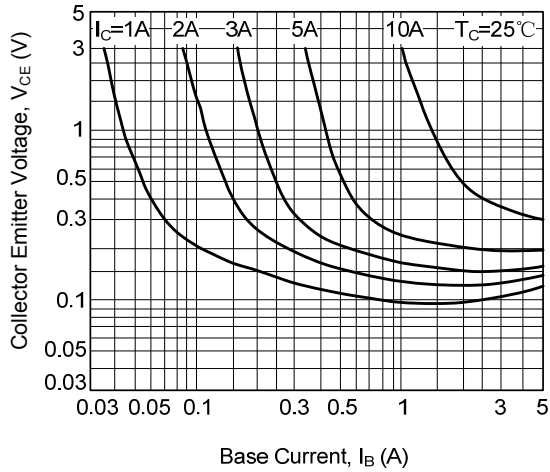
RANK	A	B	C	D	E	F
RANGE	10~15	15~20	20~25	25~30	30~35	35~45

■ SWITCHING TIME TEST CIRCUIT

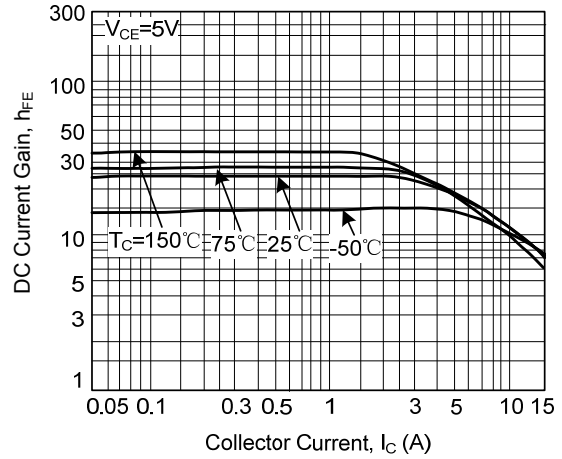


TYPICAL CHARACTERISTICS

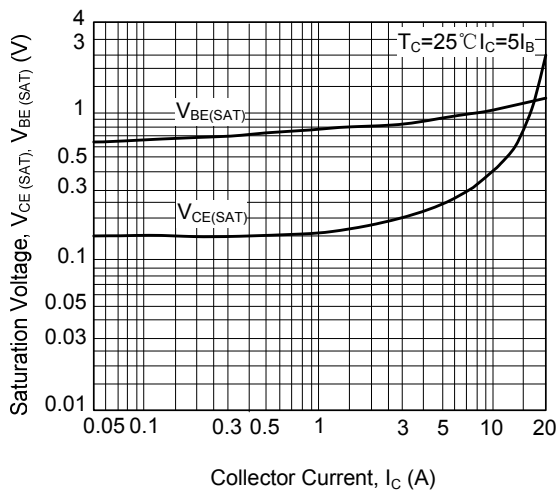
Collector Output Characteristics



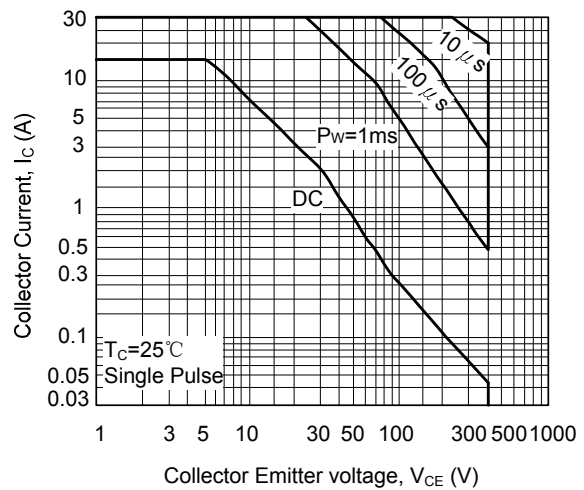
DC Current Gain



Base and Collector Saturation Voltage



Safe Operating Area



Switching Time

