



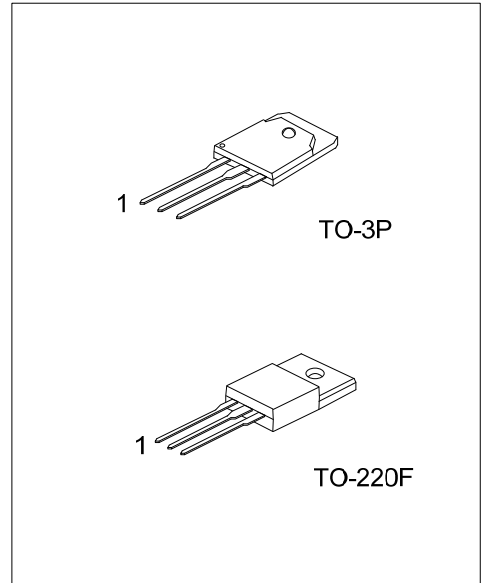
MJE13011

NPN EPITAXIAL SILICON TRANSISTOR

HIGH VOLTAGE HIGH SPEED SWITCHING

■ FEATURES

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



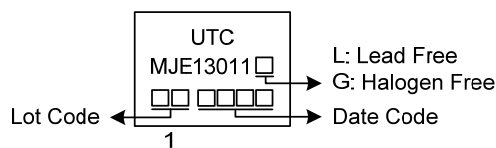
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MJE13011L-TF3-T	MJE13011G-TF3-T	TO-220F	B	C	E	Tube
MJE13011L-T3P-T	MJE13011G-T3P-T	TO-3P	B	C	E	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>MJE13011G-TF3-T</p>	<p>(1) T: Tube</p> <p>(2) TF3: TO-220F, T3P: TO-3P</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_C=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector Base Voltage		V _{CB0}	450	V
Collector Emitter Voltage		V _{CEO}	400	V
		V _{CEO(SUS)}	400	V
Emitter Base Voltage		V _{EBO}	7	V
Collector Current		I _C	10	A
Base Current		I _B	3	A
Power Dissipation	TO-220F	P _D	36	W
	TO-3P		195	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.

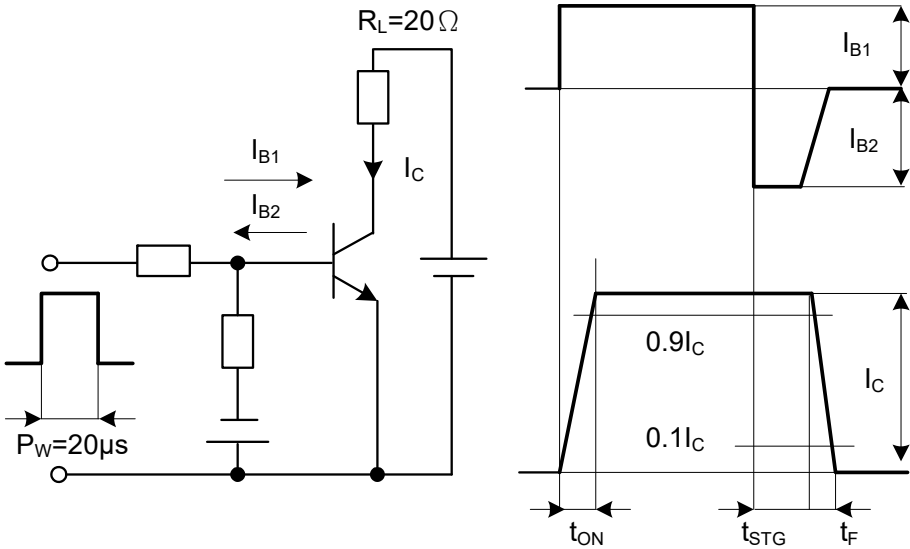
■ THERMAL DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Thermal Resistance Junction to Case	TO-220F	θ _{JC}	3.47	°C/W
	TO-3P		0.64	°C/W

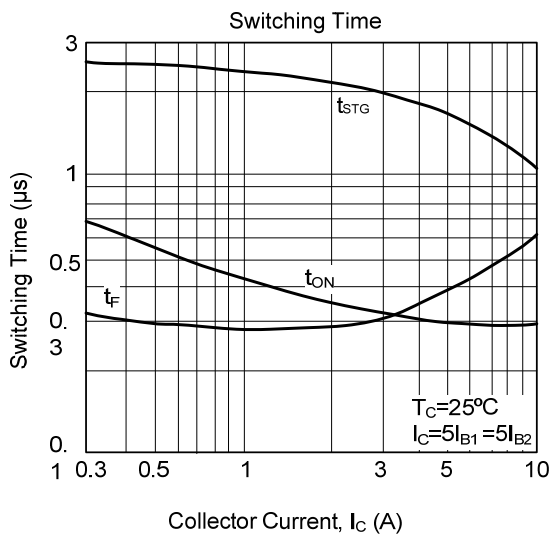
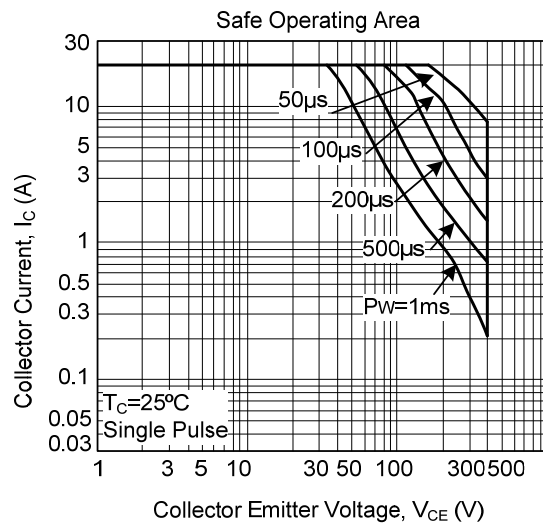
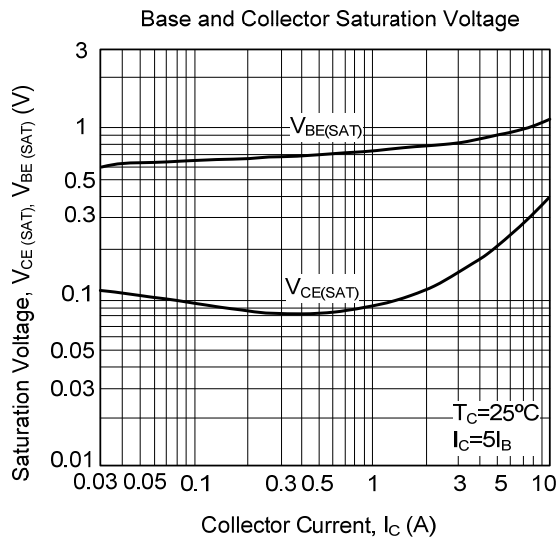
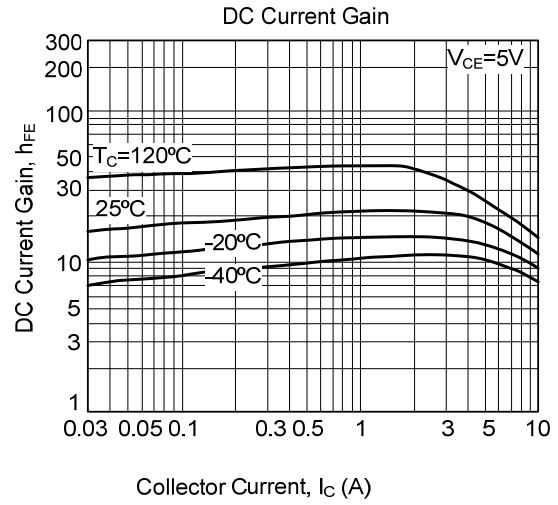
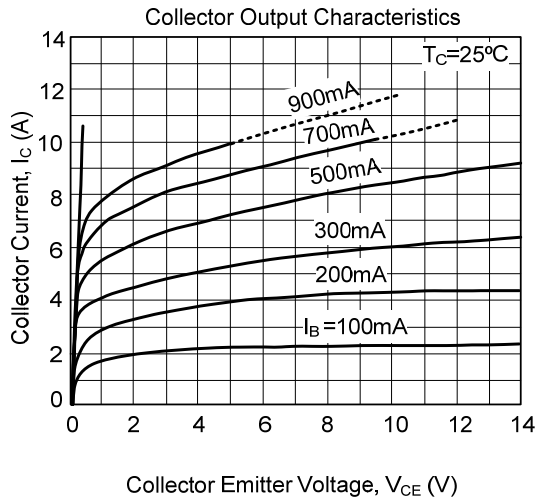
■ ELECTRICAL SPECIFICATIONS (T_C=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Voltage	V _{CB0}	I _{CB0} =1mA	450			V
Collector Emitter Voltage	V _{CEO}	I _{CEO} =10mA	400			V
	V _{CEO(SUS)}	I _C =1A	400			V
Emitter Base Voltage	V _{EBO}	I _{EBO} =0.1mA	7			V
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C =4A, I _B =0.8A			1.2	V
Base Emitter Saturation Voltage	V _{BE(SAT)}				1.5	V
Collector Cut-off Current	I _{CB0}	V _{CB0} =450V			1.0	mA
Emitter Cut-off Current	I _{EBO}	V _{EBO} =7V			0.1	mA
DC Current Gain	h _{FE}	I _C =4A, V _{CE} =5V	10		40	
Switching Time	t _{ON}	I _C =7.5A, I _{B1} =-I _{B2} =1.5A R _L =20Ω, P _w =20μs, Duty ≤ 2%			1.0	μs
	t _{STG}				2.0	μs
	t _F				1.0	μs

SWITCHING TIME TEST CIRCUIT



TYPICAL CHARACTERISTICS



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.