



2SC5889

NPN EPITAXIAL SILICON TRANSISTOR

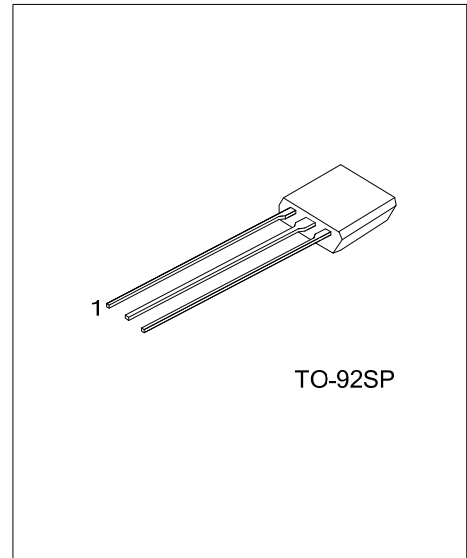
DC/DC CONVERTER APPLICATIONS

FEATURES

- *Large current capacitance
- *Low collector-emitter saturation voltage
- *High-speed switching
- *High allowable power dissipation

APPLICATIONS

- * relay drivers, lamp drivers, motor drivers, strobes



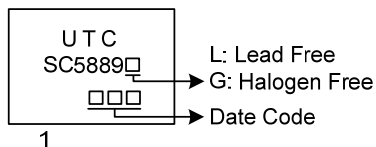
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC5889L-T9S-K	2SC5889G-T9S-K	TO-92SP	E	C	B	Bulk

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

<p>2SC5889G-T9S-K</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) K: Bulk (2) T9S: TO-92SP (3) G: Halogen Free and Lead Free, L: Lead Free
---	--

MARKING



■ ABSOLUTE MAXIMUM RATING ($T_A=25^\circ\text{C}$, unless otherwise specified)

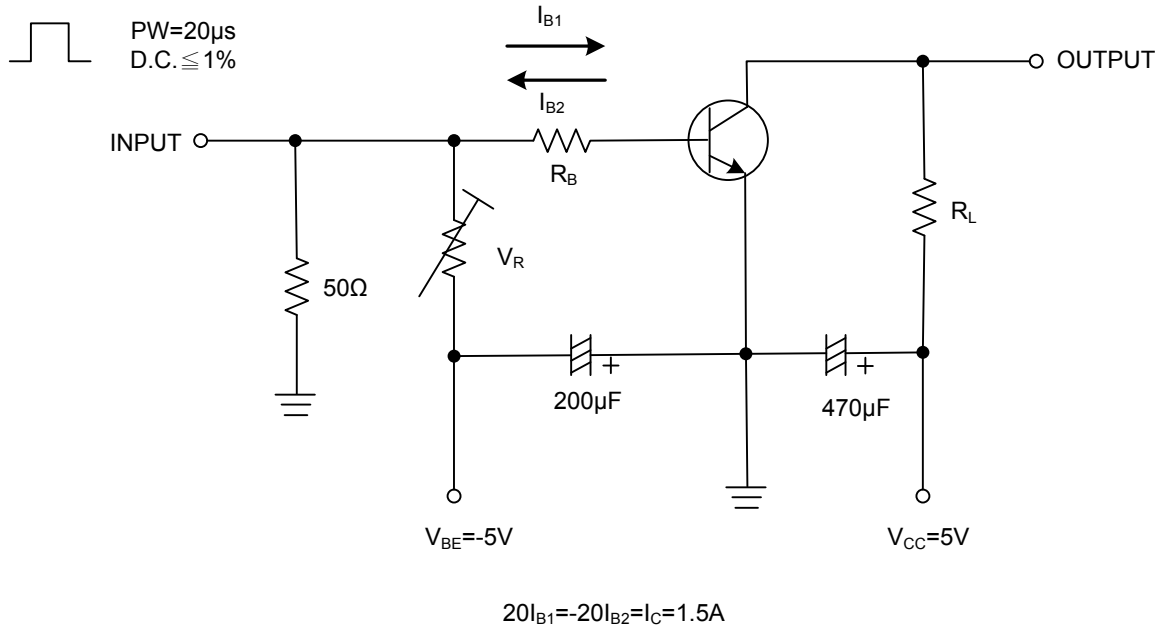
PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	15	V
Collector-Emitter Voltage		V_{CEO}	10	V
Emitter-Base Voltage		V_{EBO}	7	V
Base Current		I_B	1	A
Collector Current	DC	I_C	5	A
	Plused	I_{CP}	9	A
Collector Power Dissipation (Note 2)		P_C	550	mW
Junction Temperature		T_J	+150	$^\circ\text{C}$
Storage Temperature		T_{STG}	-55 ~ +150	$^\circ\text{C}$

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.

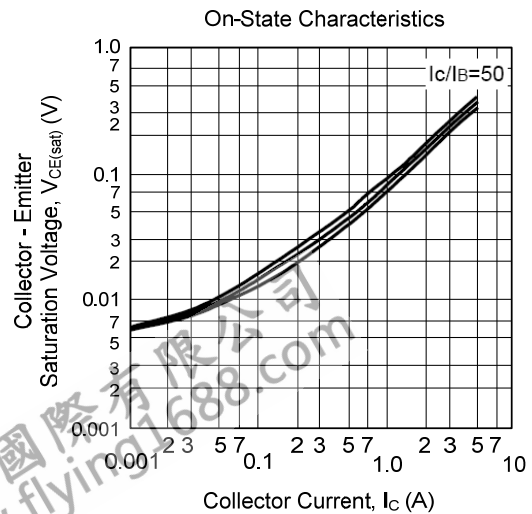
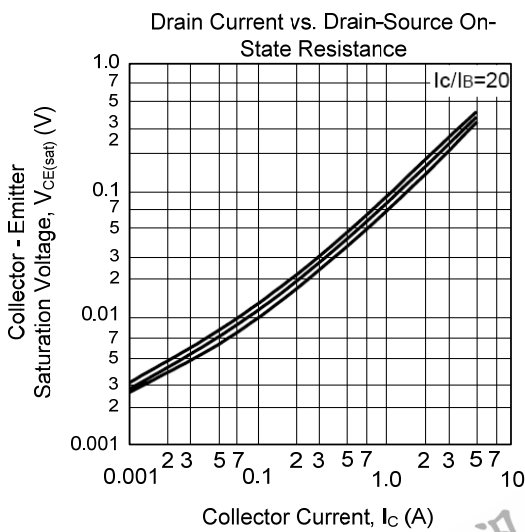
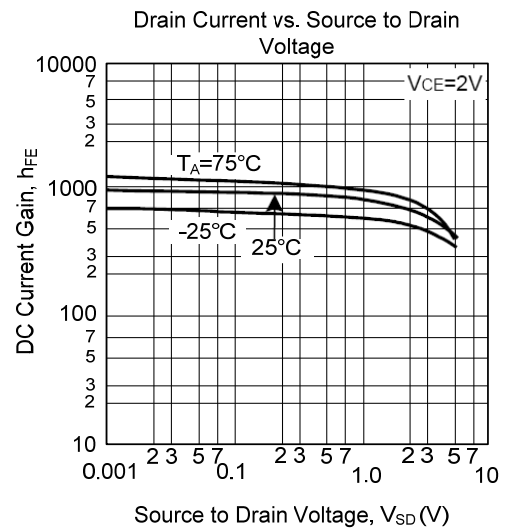
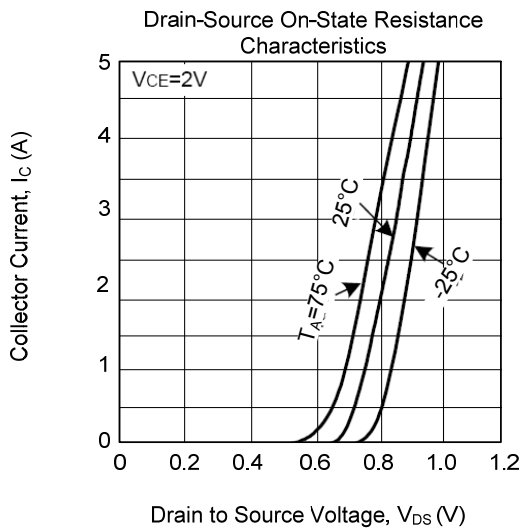
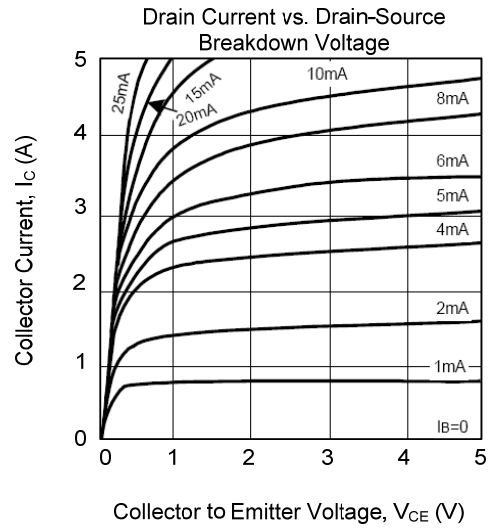
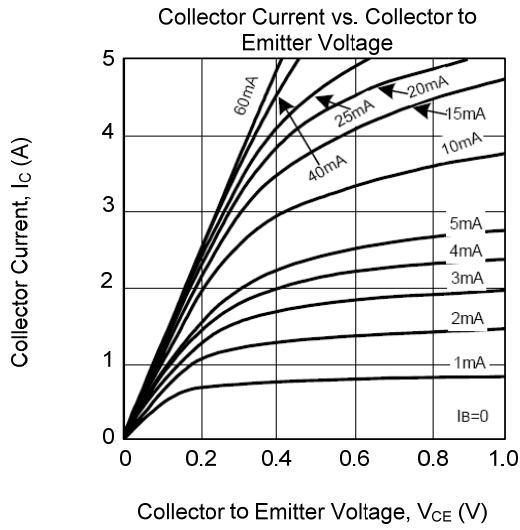
■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Breakdown Voltage	BV_{CBO}	$I_C=10\mu\text{A}$, $I_E=0$	15			V
Collector Emitter Breakdown Voltage	BV_{CEO}	$I_C=-1\text{mA}$, $R_{BE}=\infty$	10			V
Emitter Base Breakdown Voltage	BV_{EBO}	$I_E=10\mu\text{A}$, $I_C=0$	7			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=10\text{V}$, $I_E=0$			0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=4\text{V}$, $I_C=0$			0.1	μA
DC Current Gain (Note)	h_{FE1}	$V_{CE}=2\text{V}$, $I_C=500\text{mA}$				
	h_{FE2}	$V_{CE}=2\text{V}$, $I_C=3\text{A}$				
Collector-Emitter Saturation Voltage (Note)	$V_{CE(SAT)1}$	$I_C=1.5\text{A}$, $I_B=30\text{mA}$		120	180	mV
	$V_{CE(SAT)2}$	$I_C=3\text{A}$, $I_B=60\text{mA}$		230	350	mV
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=1.5\text{A}$, $I_B=30\text{mA}$		0.85	1.2	V
Gain Bandwidth Product	f_T	$V_{CE}=2\text{V}$, $I_C=500\text{mA}$		350		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$		25		pF
Turn-ON Time	t_{ON}	See specified Test Circuit		30		ns
Storage Time	T_{STG}	See specified Test Circuit		210		ns
Fall Time	t_F	See specified Test Circuit		11		ns

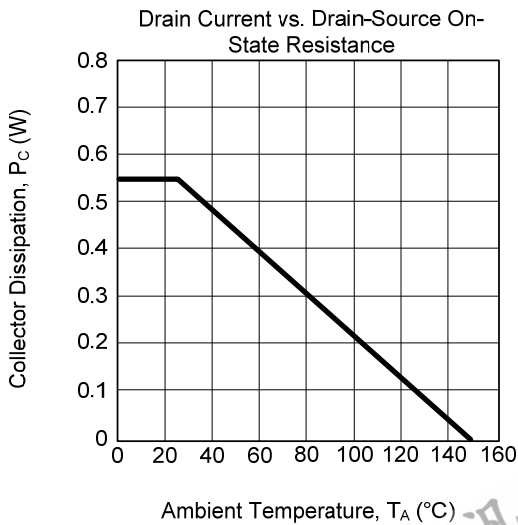
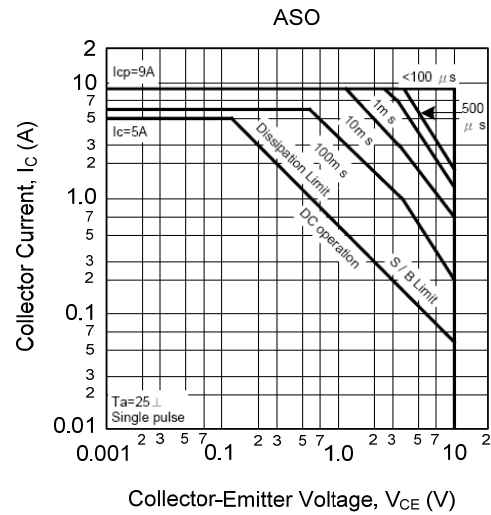
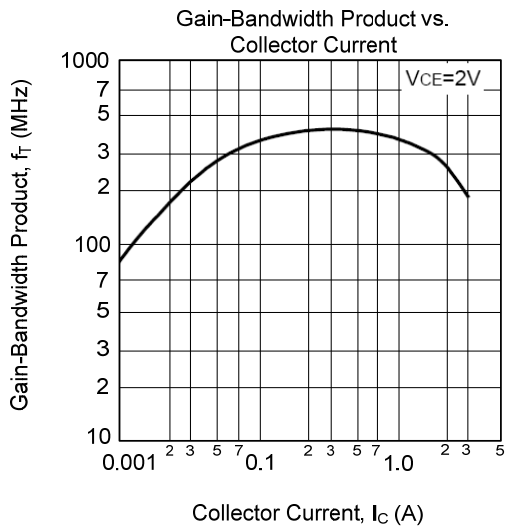
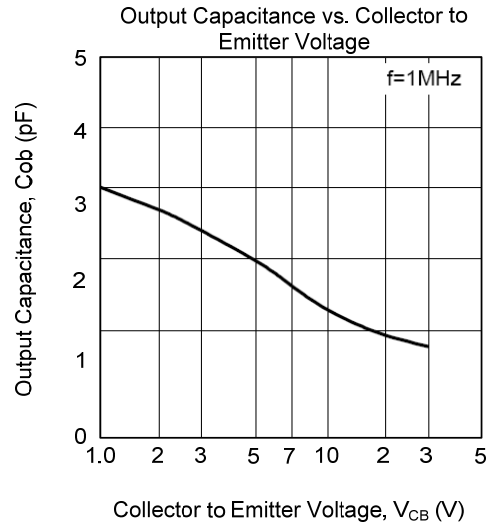
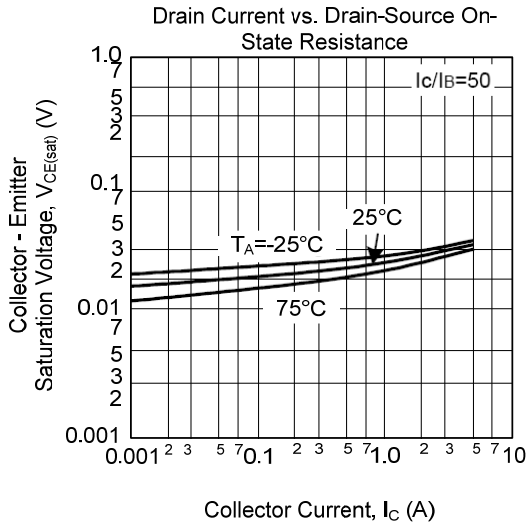
SWITCHING TIME TEST CIRCUIT



■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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.