

UTC 2SC5569 NPN EPITAXIAL SILICON TRANSISTOR

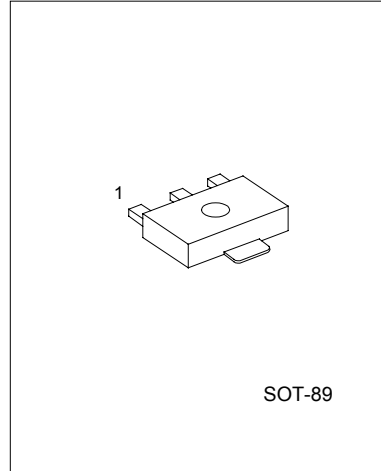
DC/DC CONVERTER APPLICATIONS

FEATURES

- *High current capacitance.
- *Low collector-to-emitter saturation voltage.
- *High-speed switching.
- *High allowable power dissipation.
- *Complementary to 2SA2016.

APPLICATIONS

- *Relay drivers, lamp drivers, motor drivers, strobos



1:EMITTER 2:COLLECTOR 3:BASE

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V _{CB0}	80	V
Collector-Emitter Voltage	V _{CE0}	50	V
Emitter-Base Voltage	V _{EB0}	6	V
Collector Current	I _c	7	A
Collector Current (Pulse)	I _{cp}	10	A
Base Current	I _b	1.2	A
Collector Dissipation	P _c	1.3*	W
T _c =25°C		3.5	
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 ~ +150	°C

* Mounted on ceramic board (250mm²×0.8mm)

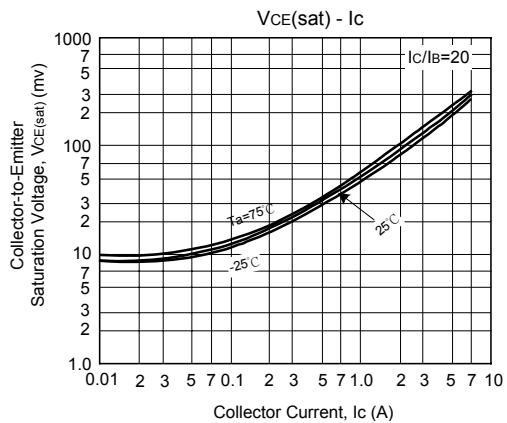
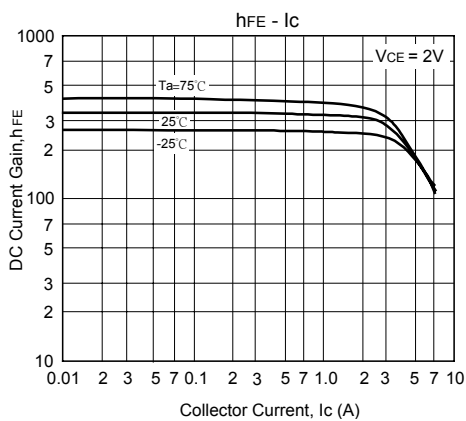
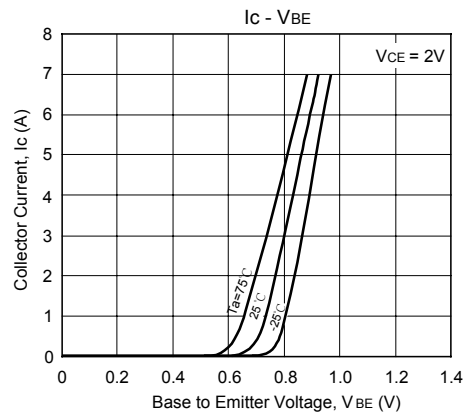
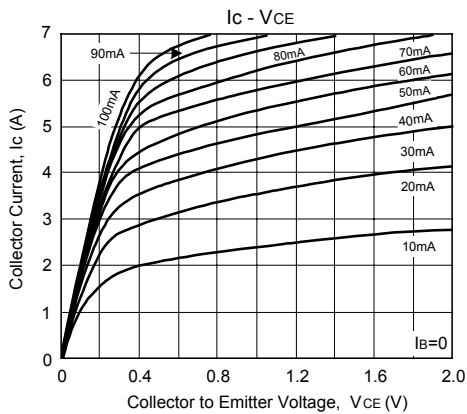
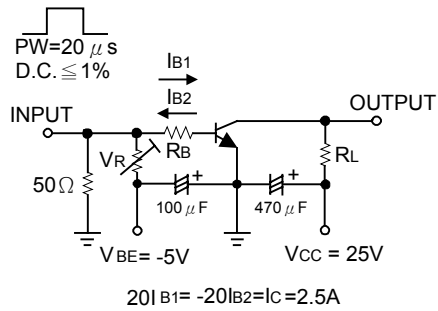
ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to Base Breakdown Voltage	V _{(BR)CBO}	I _c =10 μA, I _E =0	80			V
Collector to Emitter Breakdown Voltage	V _{(BR)CEO}	I _c =1mA, R _{BE} =∞	50			V
Emitter to Base Breakdown Voltage	V _{(BR)EBO}	I _E =10 μA, I _C =0	6			V
Collector Cut-Off Current	I _{CBO}	V _{CB} =40V, I _E =0			0.1	μA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =4V, I _c =0			0.1	μA
DC Current Gain	h _{FE}	V _{CE} =2V, I _c =500mA	200		560	
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _c =3.5A, I _b =175mA		160	240	mV
		I _c =2A, I _b =40mA		110	170	mV
Base to Emitter Saturation Voltage	V _{BE(sat)}	I _c =2A, I _b =40mA		0.83	1.2	V
Gain Bandwidth Product	f _T	V _{CE} =10V, I _c =500mA		330		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		28		pF
Turn-On Time	t _{on}	See specified Test Circuit		30		ns
Storage Time	t _{stg}	See specified Test Circuit		420		ns

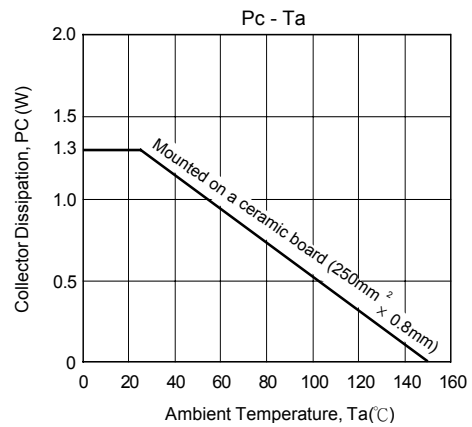
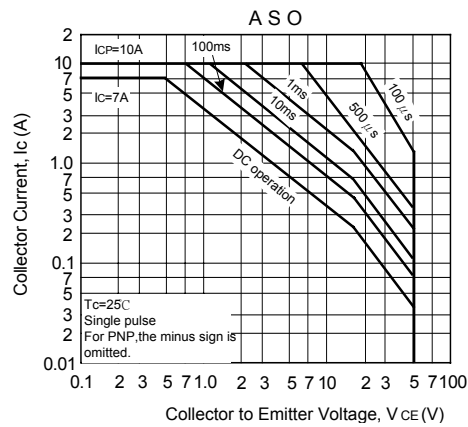
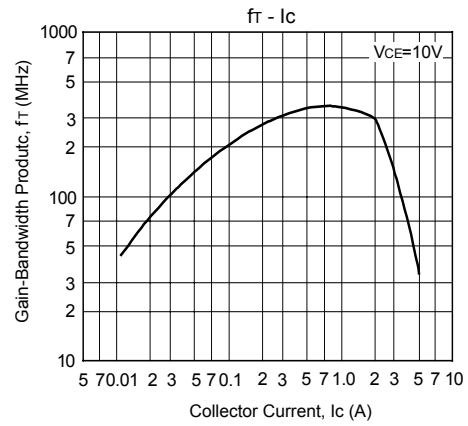
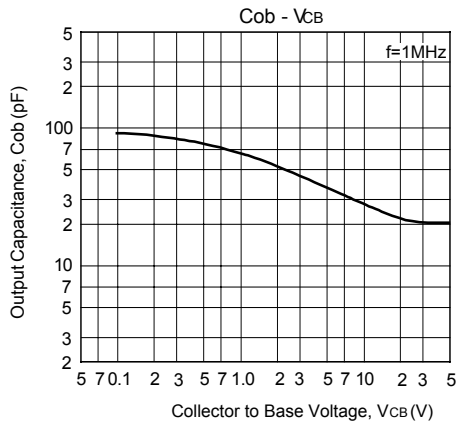
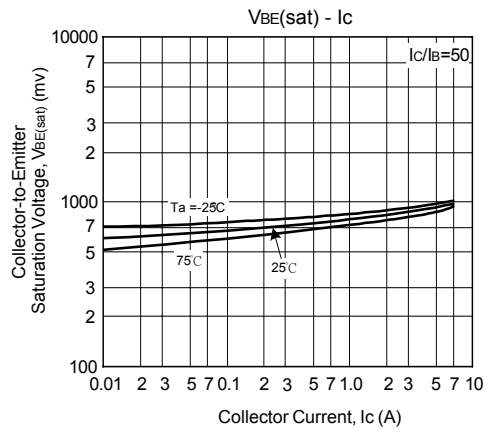
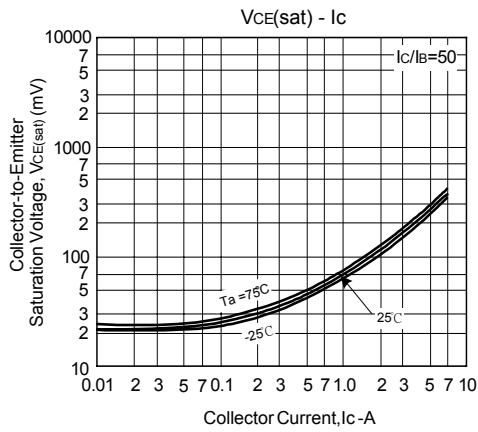
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PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Fall Time	t_f	See specified Test Circuit		25		ns

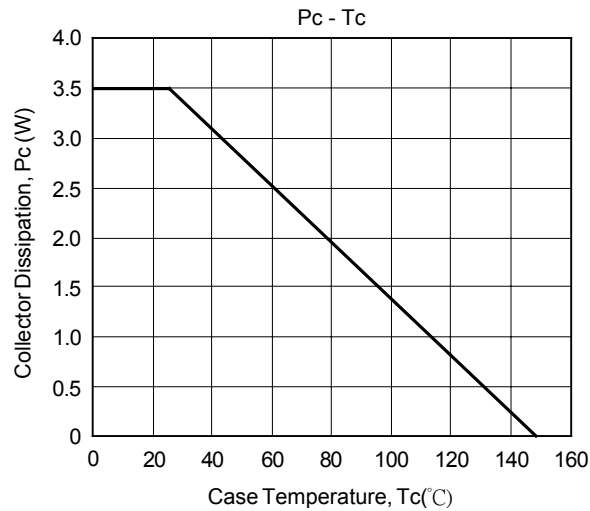
SWITCHING TIME TEST CIRCUIT



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