

UTC2SC5889 NPN EPITAXIAL SILICON TRANSISTOR

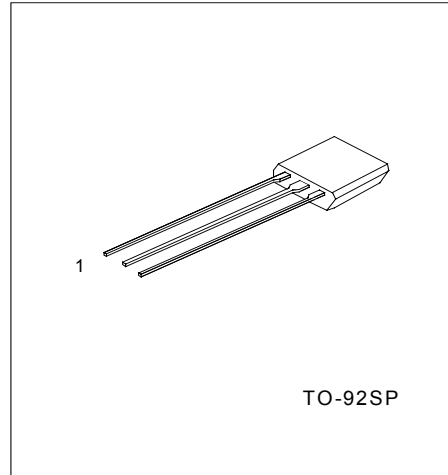
DC/DC CONVERTER APPLICATIONS

FEATURES

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

APPLICATIONS

- * relay drivers, lamp drivers, motor drivers, strobos.



1.EMITTER 2.COLLECTOR 3.BASE

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V _{CB0}	15	V
Collector-Emitter Voltage	V _{CE0}	10	V
Emitter-Base Voltage	V _{EB0}	7	V
Collector Current	I _c	5	A
Collector Current (Pulse)	I _{cp}	9	A
Base Current	I _b	1	A
Collector Dissipation	P _c	0.55	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 ~ +150	°C

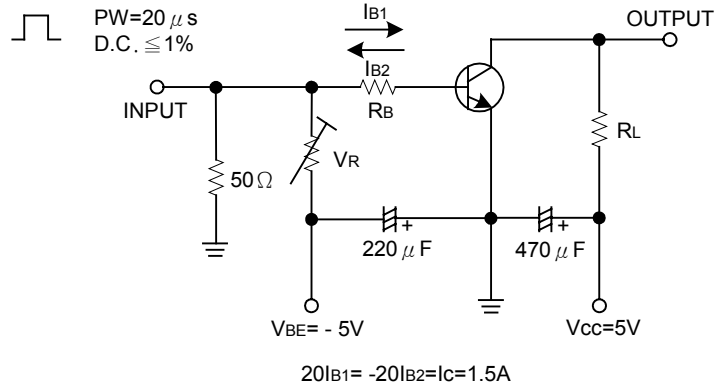
ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Breakdown Voltage	V _{(BR)CBO}	I _c =10 μ A, I _E =0	15			V
Collector Emitter Breakdown Voltage	V _{(BR)CES}	I _c =1mA, R _{BE} =∞	10			V
Emitter Base Breakdown Voltage	V _{(BR)EBO}	I _E =10 μ A, I _c =0	7			V
Collector Cutoff Current	I _{CBO}	V _{CB} =10V, I _E =0			0.1	μ A
Emitter Cutoff Current	I _{EBO}	V _{EB} =4V, I _c =0			0.1	μ A
DC Current Gain	H _{FE1}	V _{CE} =2V, I _c =500mA	450		1200	
	H _{FE2}	V _{CE} =2V, I _c =3A	200			
Collector-Emitter Saturation Voltage	V _{CE(sat)1}	I _c =1.5A, I _b =30mA		120	180	mV
	V _{CE(sat)2}	I _c =3A, I _b =60mA		230	350	mV
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _c =1.5A, I _b =30mA		0.85	1.2	V
Gain Bandwidth Product	f _r	V _{CE} =2V, I _c =500mA		350		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		23		pF
Turn-ON Time	t _{on}	See specified Test Circuit		30		ns
Storage Time	t _{stg}	See specified Test Circuit		210		
Fall Time	t _f	See specified Test Circuit		11		

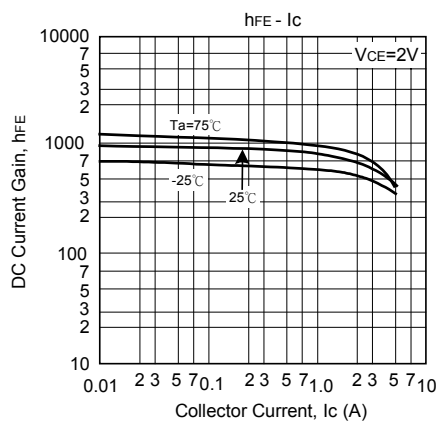
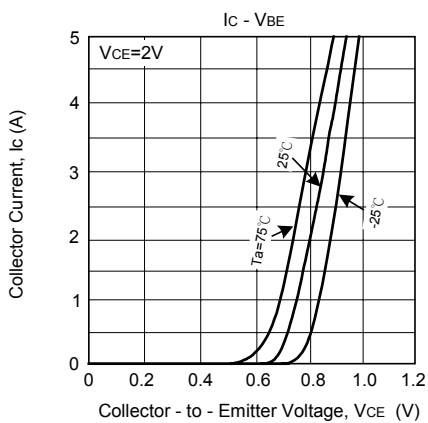
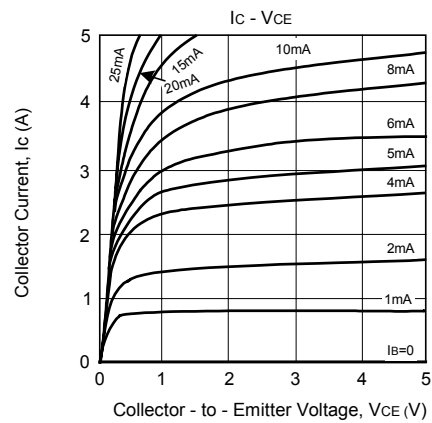
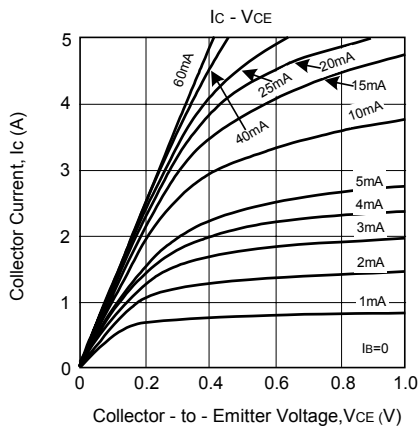
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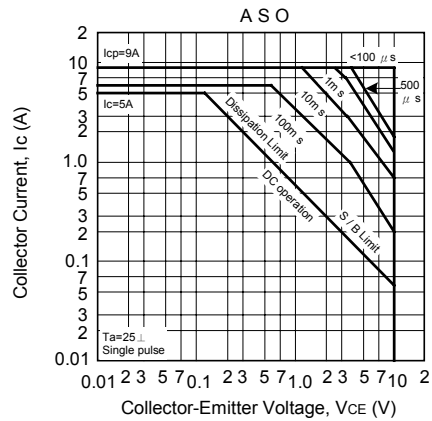
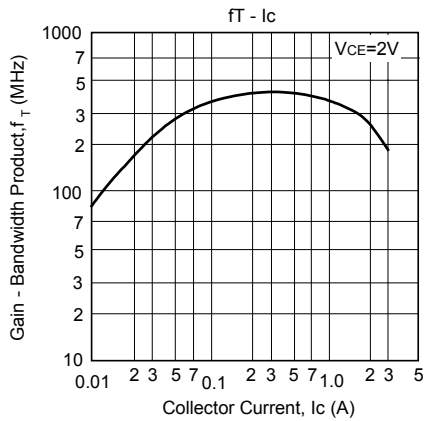
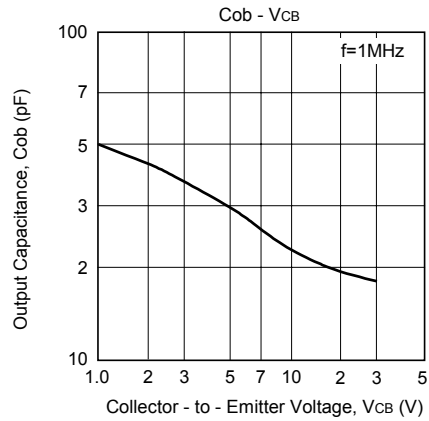
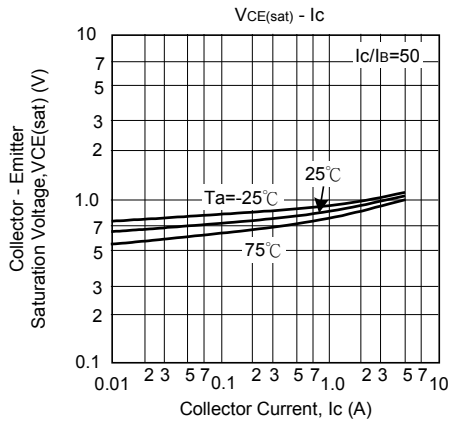
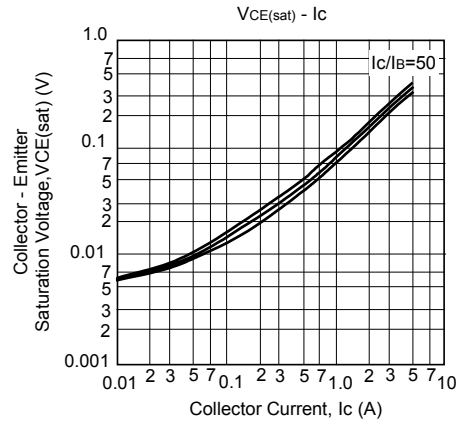
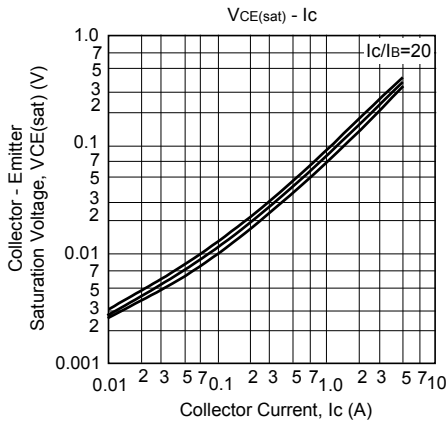
SWITCHING TIME TEST CIRCUIT



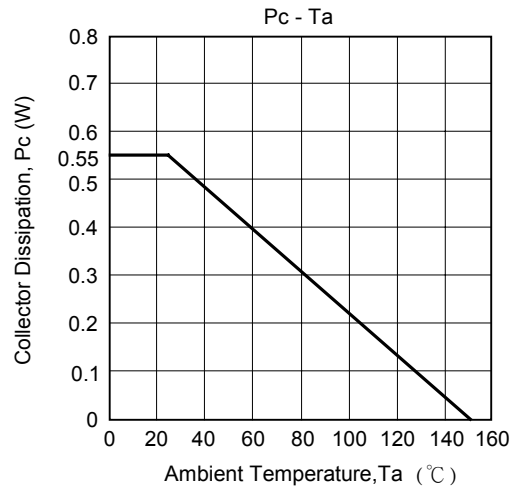
ELECTRICAL CHARACTERISTICS CURVES



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