

Inchange Semiconductor

Product Specification

Silicon NPN Power Transistors

2SC3685

DESCRIPTION

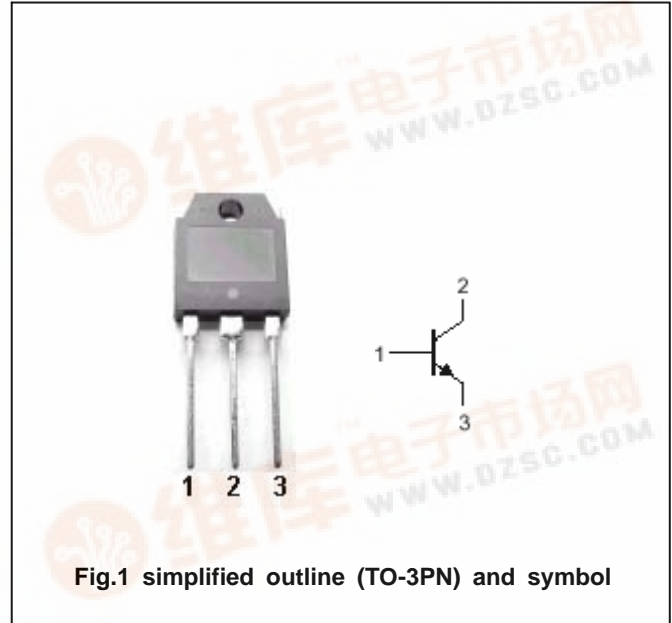
- With TO-3PN package
- High breakdown voltage
- High reliability
- Fast speed

APPLICATIONS

- Ultrahigh-definition CRT display horizontal deflection output applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter



Absolute maximum ratings(Ta=)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1500	V
V_{CEO}	Collector-emitter voltage	Open base	800	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		6	A
I_{CP}	Collector current-pulse		16	A
P_C	Collector power dissipation	$T_C=25$	125	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =100mA; I _B =0	800			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =4A; I _B =1A			5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =4A; I _B =1A			1.5	V
I _{CES}	Collector cut-off current	V _{CE} =1500V; R _{BE} =0			1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =4V; I _C =0			1	mA
h _{FE}	DC current gain	I _C =1A; V _{CE} =5V	8			

Switching times

t _{stg}	Storage time	I _C =4A; I _{B1} =0.8A; I _{B2} =-1.6A V _{CC} =200V			3.0	μs
t _f	Fall time			0.1	0.2	μs

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Fig.2 outline dimensions (unindicated tolerance: $\pm 0.1\text{mm}$)

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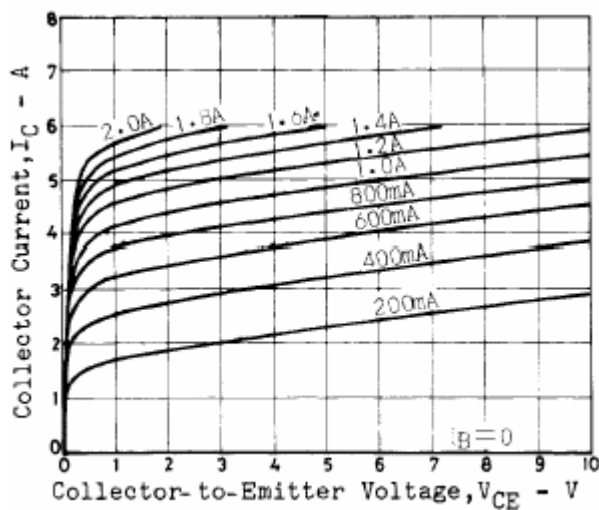


Fig.3 Static Characteristic

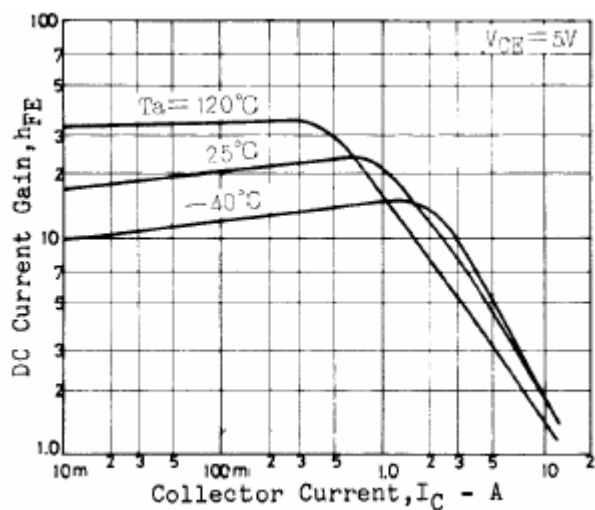


Fig.4 DC current Gain

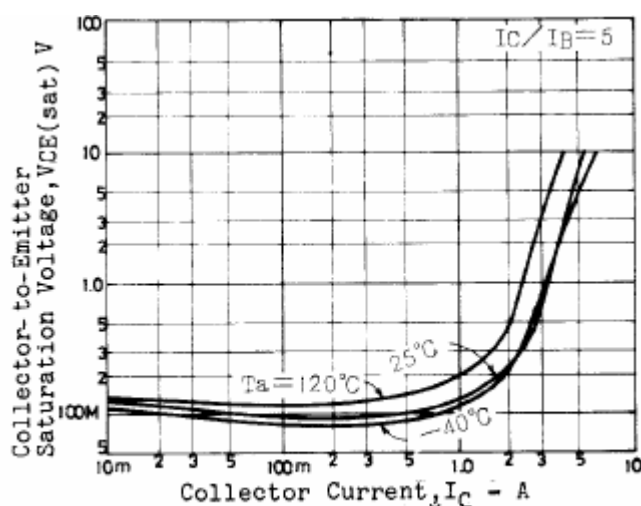


Fig.5 Collector-Emitter Saturation Voltage

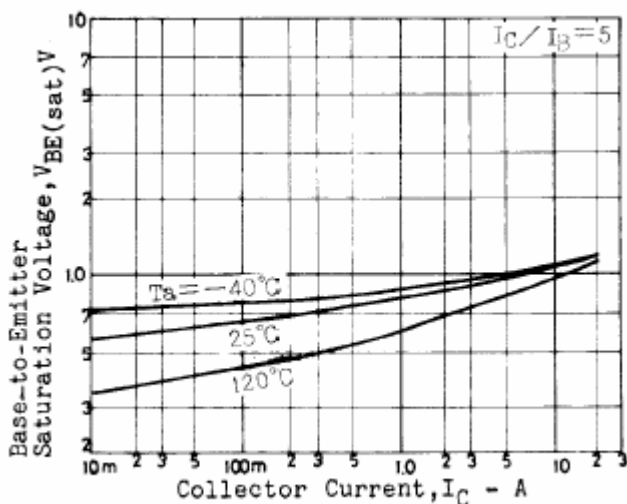


Fig.6 Base-Emitter Saturation Voltage

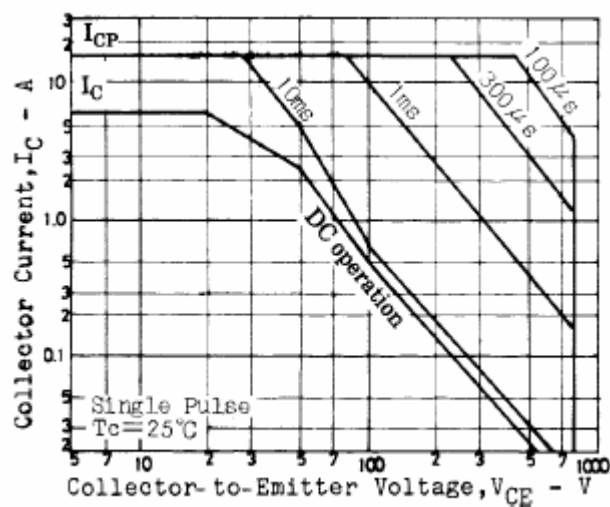


Fig.7 Safe Operating Area