

Silicon NPN Power Transistors

2SC3894

DESCRIPTION

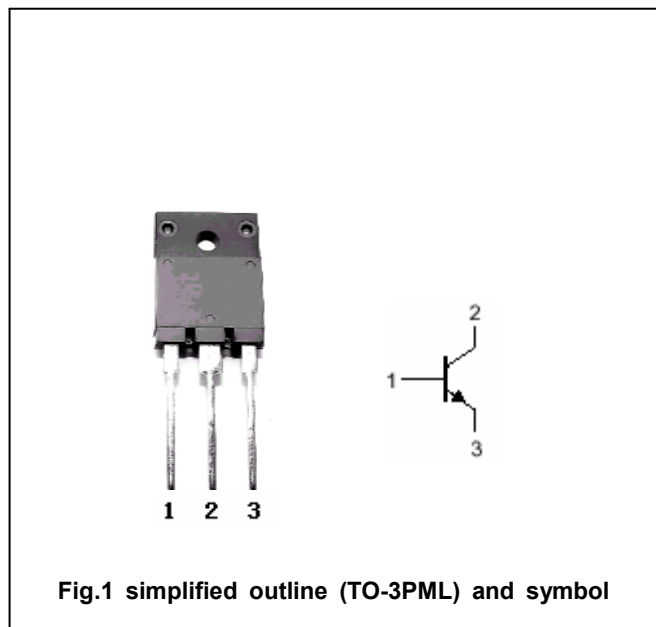
- With TO-3PML package
- High speed
- High breakdown voltage
- High reliability

APPLICATIONS

- Ultrahigh-definition CRT display horizontal deflection output applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

Absolute maximum ratings ($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	MAX	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_{CM}	Collector current-peak		16	A
P_C	Collector dissipation	$T_a=25^\circ\text{C}$	3.0	W
		$T_C=25^\circ\text{C}$	60	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

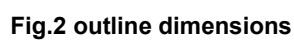
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.1A ; I _B =0	800			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =4A ; I _B =1A			5.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =4A ; I _B =1A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =800V ; I _E =0			10	μA
I _{CES}	Collector cut-off current	V _{CE} =1500V ; R _{BE} =0			1.0	mA
h _{FE-1}	DC current gain	I _C =1A ; V _{CE} =5V	8			
h _{FE-2}	DC current gain	I _C =4A ; V _{CE} =5V	4		8	

Switching times

t _{stg}	Storage time	I _C =4A ; V _{CC} =200V I _{B1} =0.8A ; I _{B2} =1.6A R _L =50Ω			3.0	μs
t _f	Fall time			0.1	0.2	μs

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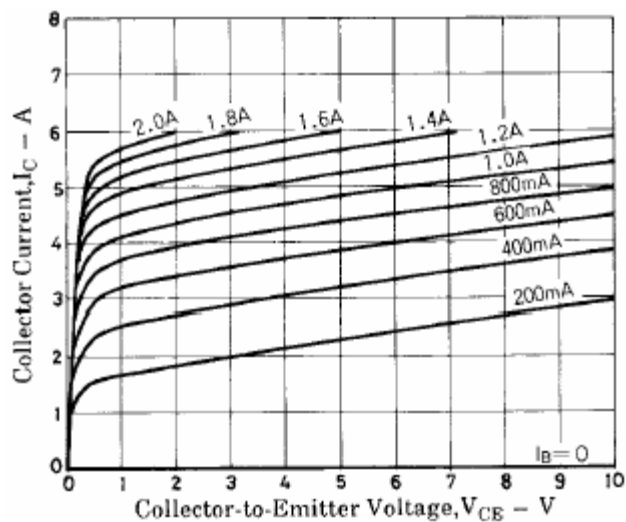


Fig.3 Static Characteristic

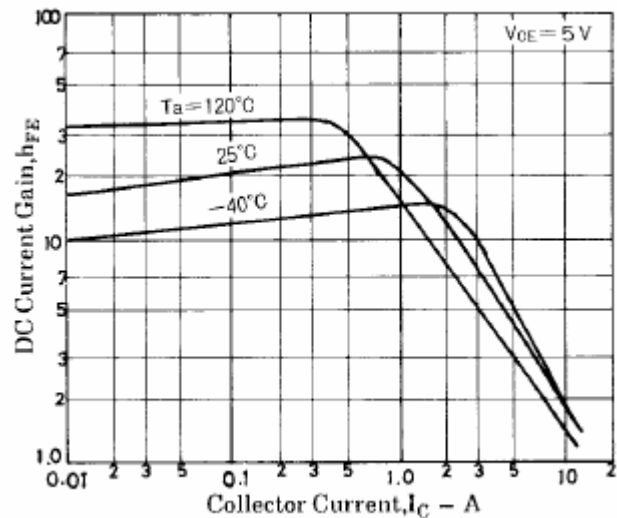


Fig.4 DC current Gain

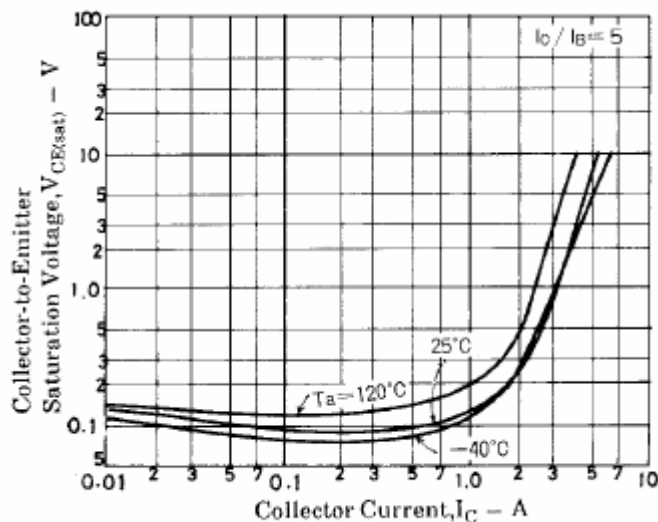


Fig.5 Collector-Emitter Saturation Voltage

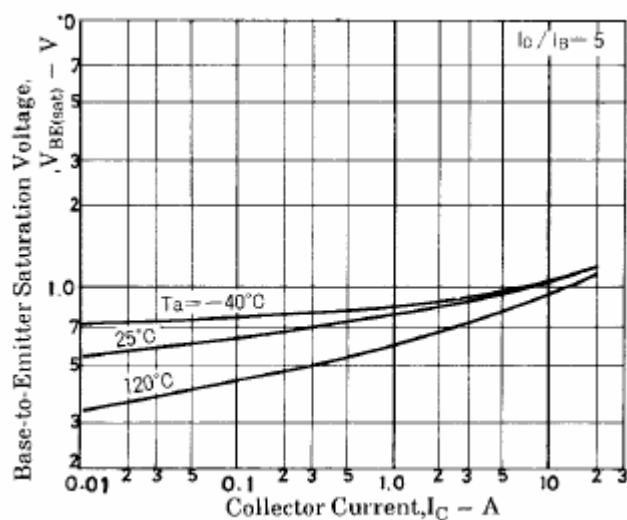


Fig.6 Base-Emitter Saturation Voltage

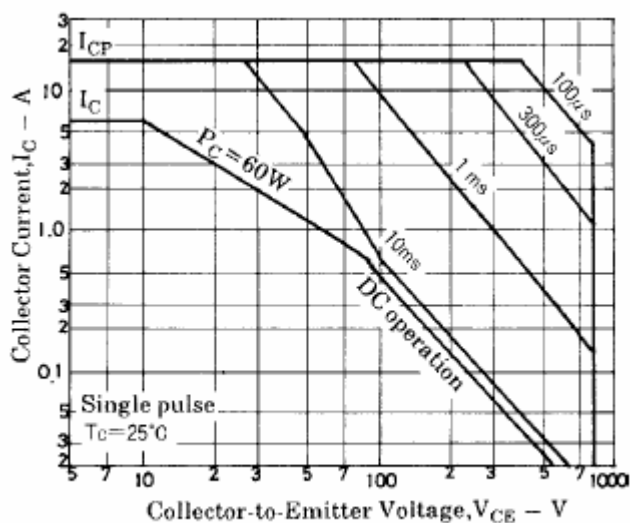


Fig.7 Safe Operating Area