

Silicon NPN Power Transistors

2SD1877

DESCRIPTION

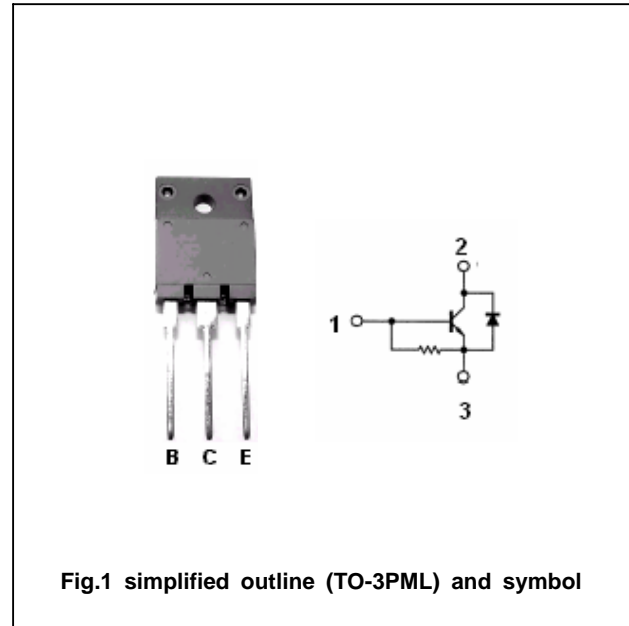
- With TO-3PML package
- High speed
- High breakdown voltage
- High reliability
- Built-in damper diode

APPLICATIONS

- Color TV horizontal deflection output
- Color display horizontal deflection output

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

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

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		4	A
I_{CM}	Collector current-peak		12	A
P_C	Collector power dissipation		50	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

Silicon NPN Power Transistors

2SD1877

CHARACTERISTICS

T_j=25°C 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 =2.5A; I _B =0.8A			5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =2.5A; I _B =0.8A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =800V; I _E =0			10	μ A
I _{CES}	Collector cut-off current	V _{CB} =1500V; R _{BE} =0			1.0	mA
I _{EBO}	Emitter cut-off current	V _{EB} =4V; I _C =0	40		130	mA
h _{FE-1}	DC current gain	I _C =0.5A ; V _{CE} =5V	8			
h _{FE-2}	DC current gain	I _C =2.5A ; V _{CE} =5V	3.5		7	
V _F	Diode forward voltage	I _{EC} =4A			2.0	V
t _f	Fall time	I _C =3A; R _L =50 Ω I _{B1} =0.8A; I _{B2} =-1.6A; V _{CC} =200V		0.1	0.3	μ s

Silicon NPN Power Transistors

2SD1877

PACKAGE OUTLINE

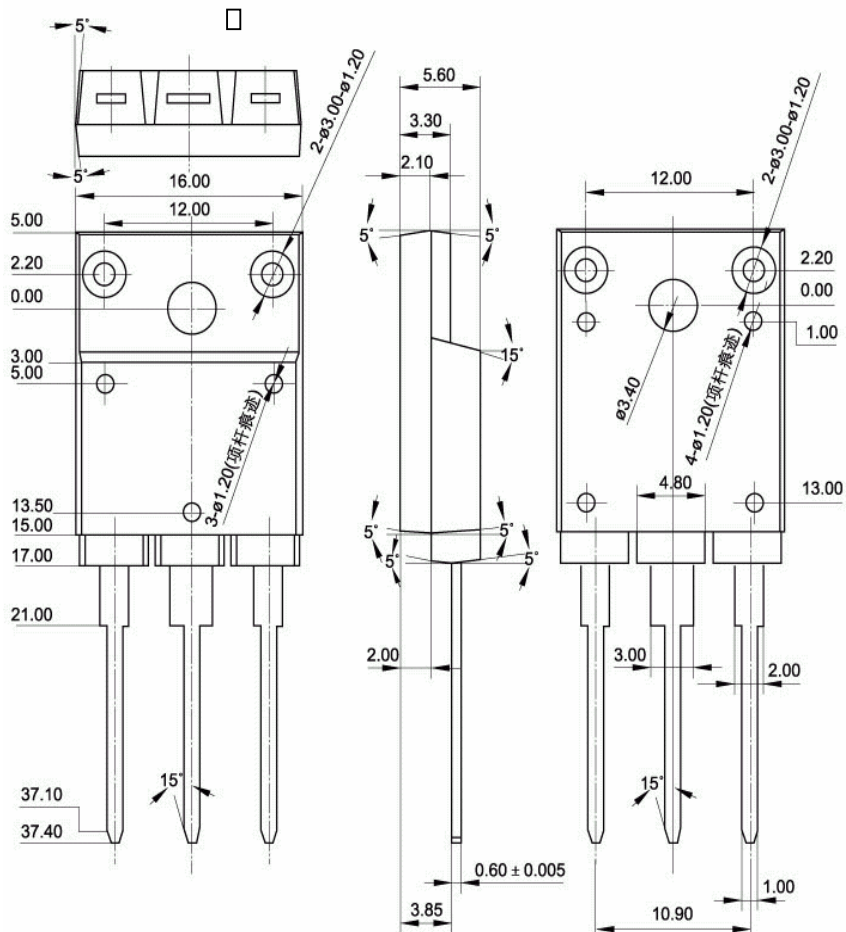


Fig.2 Outline dimensions

Silicon NPN Power Transistors

2SD1877

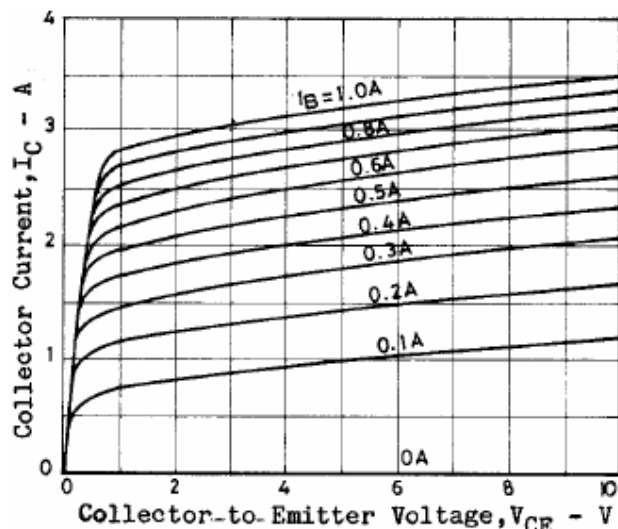


Fig.3 Static Characteristic

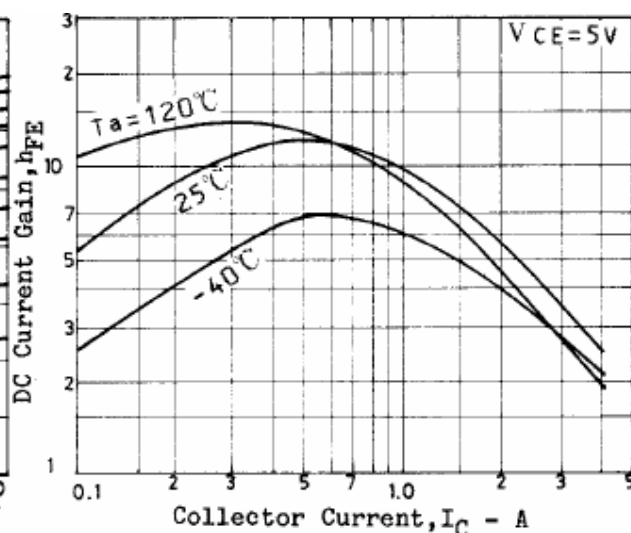


Fig.4 DC current Gain

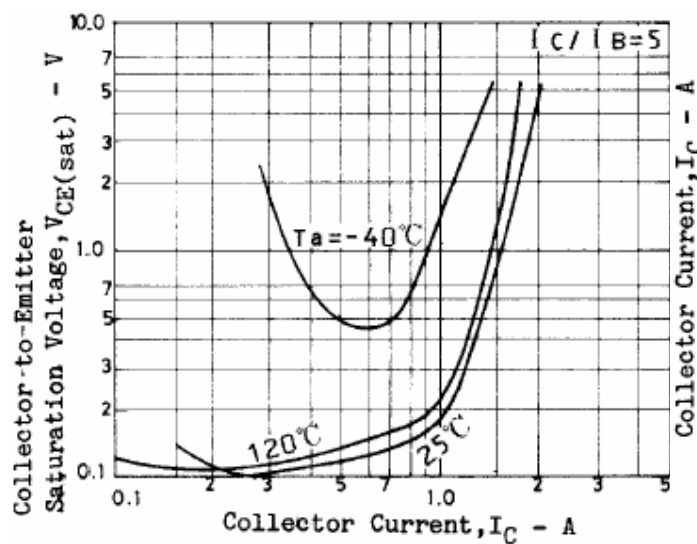


Fig.5 Collector-Emitter Saturation Voltage

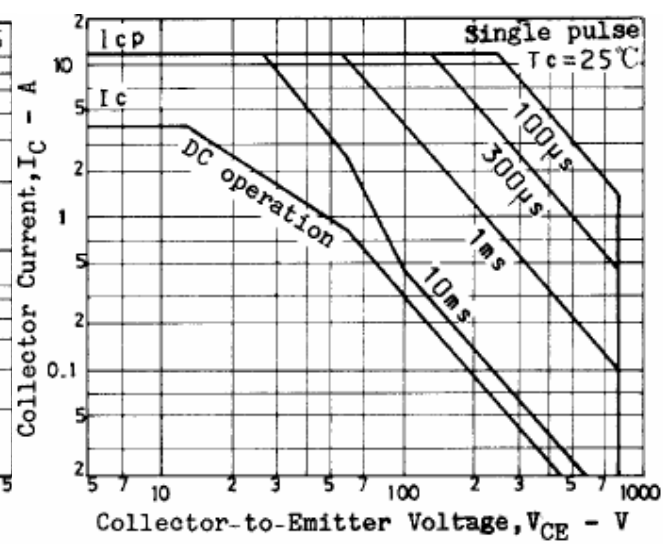


Fig.6 Safe Operating Area