

Silicon NPN Power Transistors

2SC3850

DESCRIPTION

- With TO-3PN package
- Good linearity of h_{FE}
- Low collector saturation voltage

APPLICATIONS

- For power switching applications

PINNING

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

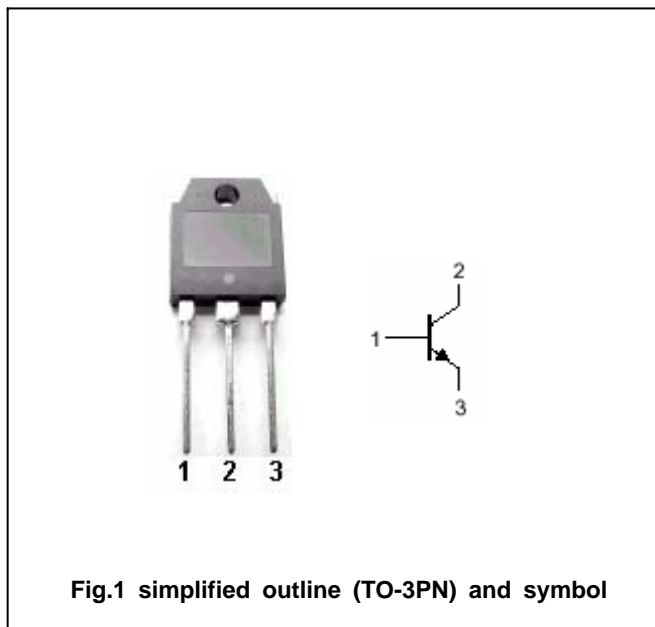


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	500	V
V_{CEO}	Collector-emitter voltage	Open base	400	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		20	A
I_{CM}	Collector current-peak		30	A
I_B	Base current		6	A
P_C	Collector power dissipation	$T_a=25$	2.5	W
		$T_C=25$	125	
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

Silicon NPN Power Transistors

2SC3850

CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.5A ; L=25mH	400			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =10A ; I _B =2A			1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =10A ; I _B =2A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =500V ; I _E =0			100	μA
I _{EBO}	Emitter cut-off current	V _{EB} =7V ; I _C =0			100	μA
h _{FE-1}	DC current gain	I _C =2A ; V _{CE} =5V	15			
h _{FE-2}	DC current gain	I _C =10A ; V _{CE} =5V	10			
f _T	Transition frequency	I _C =1A ; V _{CE} =10V		15		MHz

Switching times

t _{on}	Turn-on time	I _C =10A I _{B1} =-I _{B2} =2A V _{CC} =125V			1.0	μs
t _s	Storage time				2.5	μs
t _f	Fall time				1.0	μs

Silicon NPN Power Transistors

2SC3850

PACKAGE OUTLINE

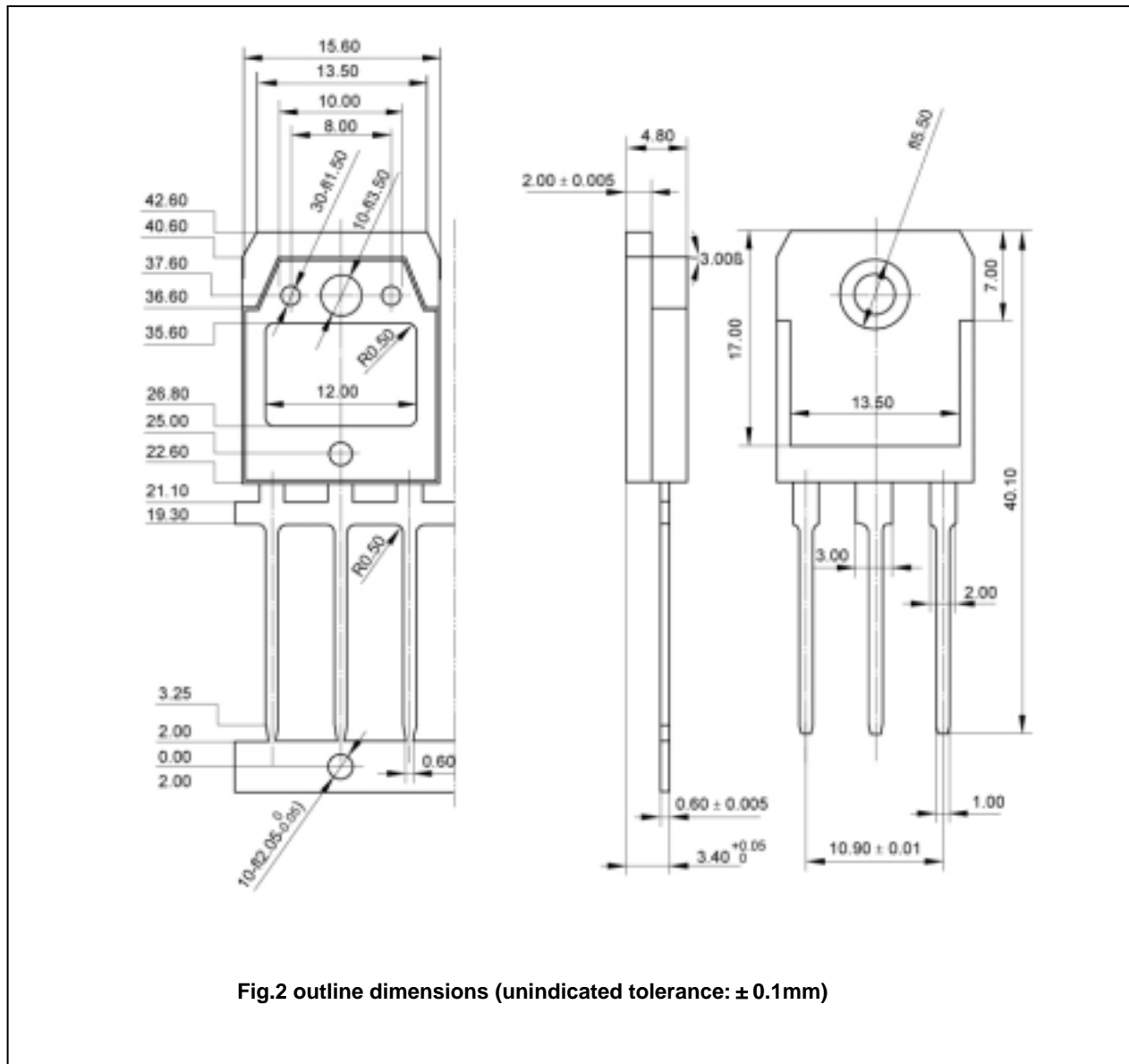


Fig.2 outline dimensions (unindicated tolerance: ± 0.1mm)