Silicon NPN Power Transistors 2SC4941

DESCRIPTION

·With TO-3PML package
·Switching power transistor
·High breakdown voltage

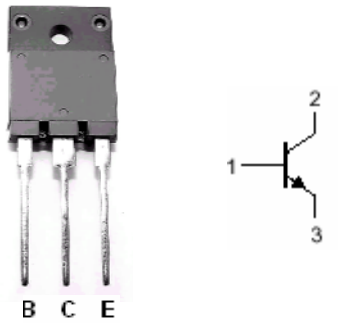


Fig.1 simplified outline (TO-3PML) and symbol

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

Absolute maximum ratings(Ta=25□)

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	7	V
I_C	Collector current		6	A
I_{CM}	Collector current-Peak		12	A
I_B	Base current		3	A
I_B	Base current-Peak		6	A
P_T	Total power dissipation	T_C=25□	65	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j\text{-}C}$	Thermal resistance from junction to case	1.92	□/W

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CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	I_C=0.2A ;I_B=0	800			V
V_{CBO}	Collector-base voltage	I_C=1mA ;I_E=0	1500			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=3A ;I_B=0.6A			0.5	V
V_{BEsat}	Base-emitter saturation voltage	I_C=3A; I_B=0.6A			1.5	V
I_{CBO}	Collector cut-off current	V_{CB}=1200V; I_E=0			100	μA
I_{CEO}	Collector cut-off current	V_{CE}=RatedV_{CEO}; I_B=0			100	μA
I_{EBO}	Emitter cut-off current	V_{EB}=RatedV_{EBO}; I_C=0			100	μA
h_{FE-1}	DC current gain	I_C=1A ; V_{CE}=5V	15			
h_{FE-2}	DC current gain	I_C=1mA ; V_{CE}=5V	7			
f_T	Transition frequency	I_C=0.6A ; V_{CE}=10V		8		MHz

Switching times

t_{on}	Turn-on time	I_C=3A I_{B1}=0.6A; I_{B2}=-1.2A V_{BB2}=4V R_L=85Ω			0.5	μs
t_s	Storage time				3.5	μs
t_f	Fall time				0.3	μs

PACKAGE OUTLINE

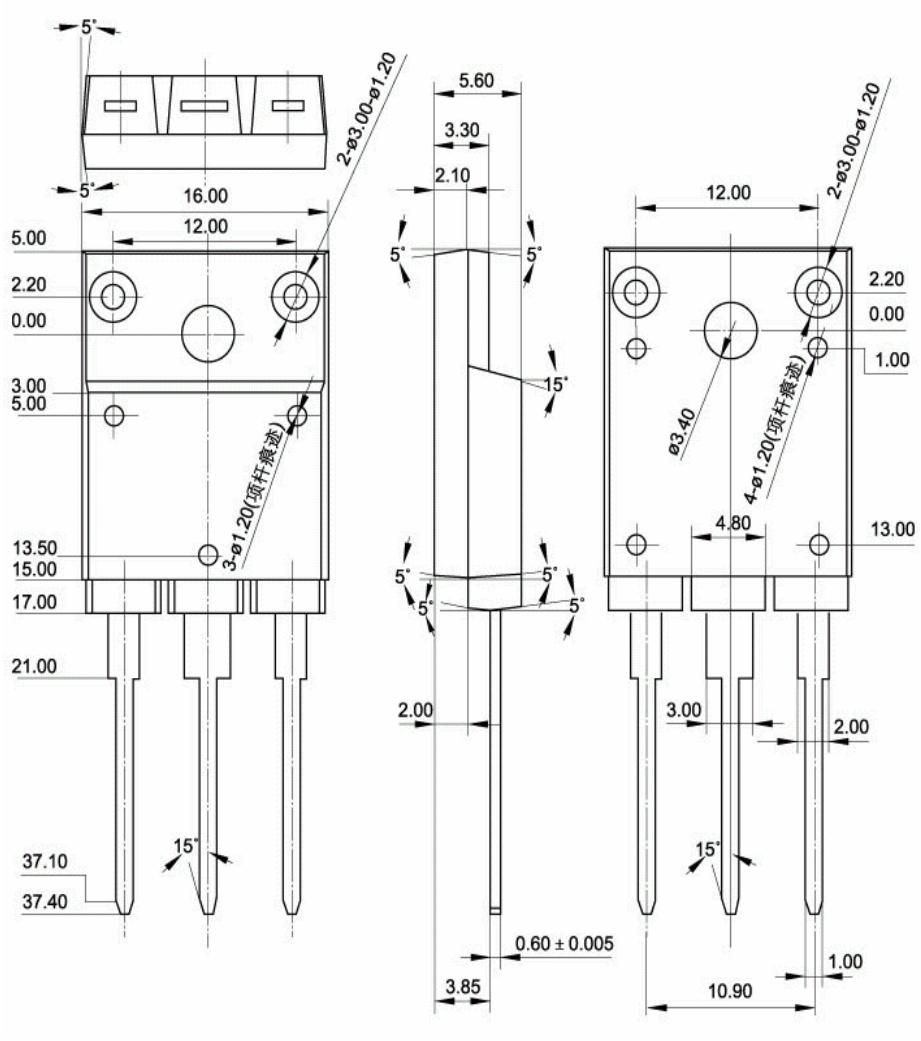


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)