SPTECH Silicon NPN Power Transistors

DESCRIPTION

- With TO-3PML package
- High voltage,high speed
- Low collector saturation voltage

APPLICATIONS

- Horizontal deflection stage in standard and high reslolution displays for TV's and monitors.
- Switching power supplies for TV's and monitors.

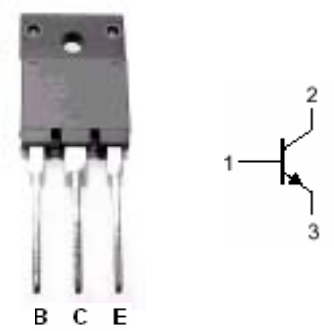


Fig.1 simplified outline (TO-3PML) and symbol

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	1700	V
V_{CEO}	Collector-emitter voltage	Open base	700	V
V_{EBO}	Emitter-base voltage	Open collector	10	V
I_C	Collector current (DC)		8	A
I_{CM}	Collector current (Pulse)		15	A
I_B	Base current (DC)		5	A
I_{BM}	Base current (Pulse)		8	A
P_{tot}	Total power dissipation	T_C=25℃	60	W
T_j	Operating junction temperature		150	℃
T_{stg}	Storage temperature		-65~150	℃

SPTECH Silicon NPN Power Transistors

CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	I_C=100mA; I_B=0	700			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=10mA; I_C=0	10			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=5A ;I_B=1.25A			1.5	V
V_{BEsat}	Base-emitter saturation voltage	I_C=5A ;I_B=1.25A			1.3	V
I_{CES}	Collector cut-off current	V_{CE}=1700V; V_{BE}=0 T_j=125℃			1.0 2.0	mA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			100	μA
h_{FE}	DC current gain	I_C=5A ; V_{CE}=5V	6			

Switching times

t_s	Storage time	I_C=5A;I_{B1}=1.25A;I_{B2}=2.5A; V_{CC}=400V		2.7	3.9	μs
t_f	Fall time			190	280	ns

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal resistance from junction to case	2.08	℃/W

SPTECH Silicon NPN Power Transistors

PACKAGE OUTLINE

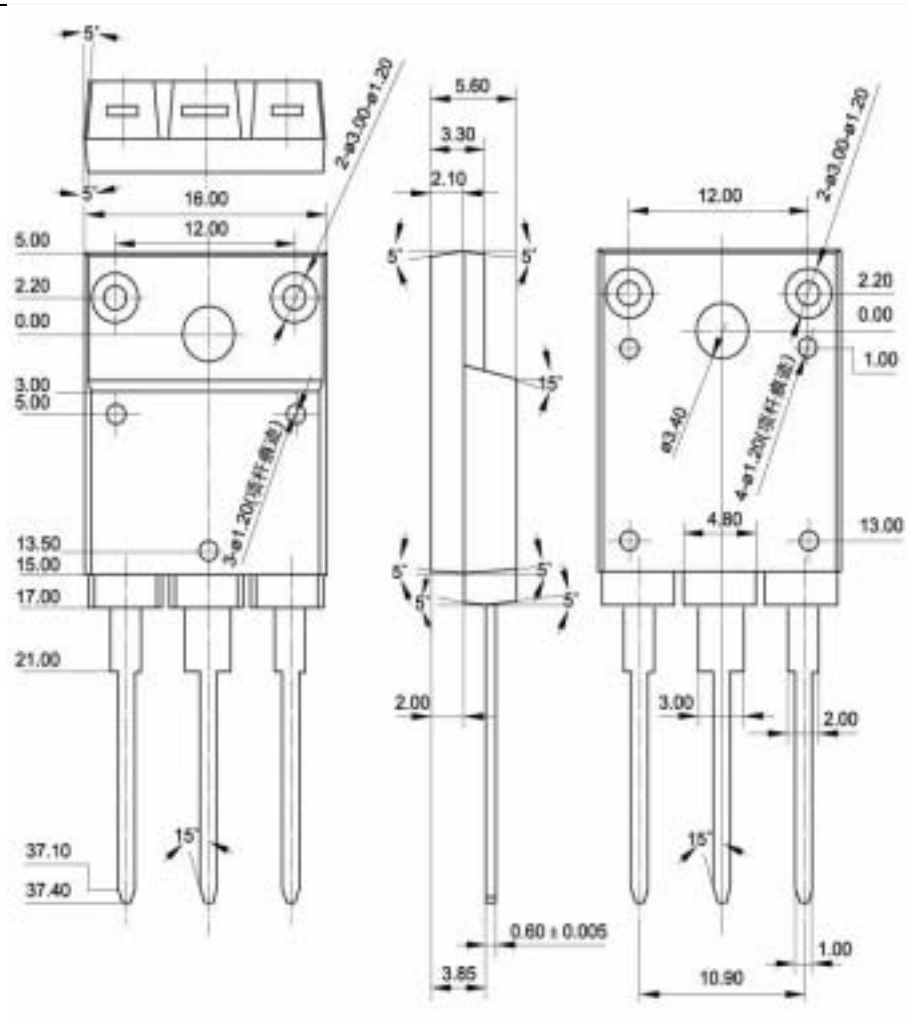


Fig.2 Outline dimensions