Silicon NPN Power Transistors 2SC4940

DESCRIPTION

·With ITO-220 package

·Switching power transistor

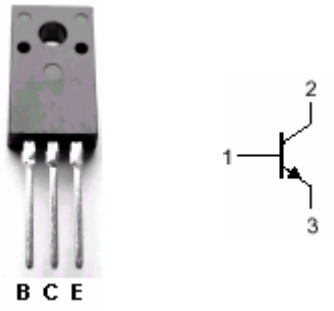

Fig.1 simplified outline (ITO-220) and symbol

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	1200	V
V_{CEO}	Collector-emitter voltage	Open base	550	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		4	A
I_{CM}	Collector current-Peak		8	A
I_B	Base current		2	A
I_{BM}	Base current-peak		4	A
P_T	Total power dissipation	T_C=25□	30	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}C}$	Thermal resistance junction case	4.16	□/W

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	I_C=0.1A ;I_B=0	550			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=2A; I_B=0.4A			1.0	V
V_{BEsat}	Base-emitter saturation voltage	I_C=2A; I_B=0.4A			1.5	V
I_{CBO}	Collector cut-off current	At rated volatge			0.1	mA
I_{CEO}	Collector cut-off current					
I_{EBO}	Emitter cut-off current	At rated volatge			0.1	mA
h_{FE-1}	DC current gain	I_C=2A ; V_{CE}=5V	10			
h_{FE-2}	DC current gain	I_C=1mA ; V_{CE}=5V	10			
f_T	Transition frequency	I_C=0.4A ; V_{CE}=10V		10		MHz
Switching times						
t_{on}	Turn-on time	I_C=2A;I_{B1}=0.4A I_{B2}=0.8A ,R_L=75Ω V_{BB2}=4V			0.8	μs
t_s	Storage time				3.0	μs
t_f	Fall time				0.3	μs

PACKAGE OUTLINE

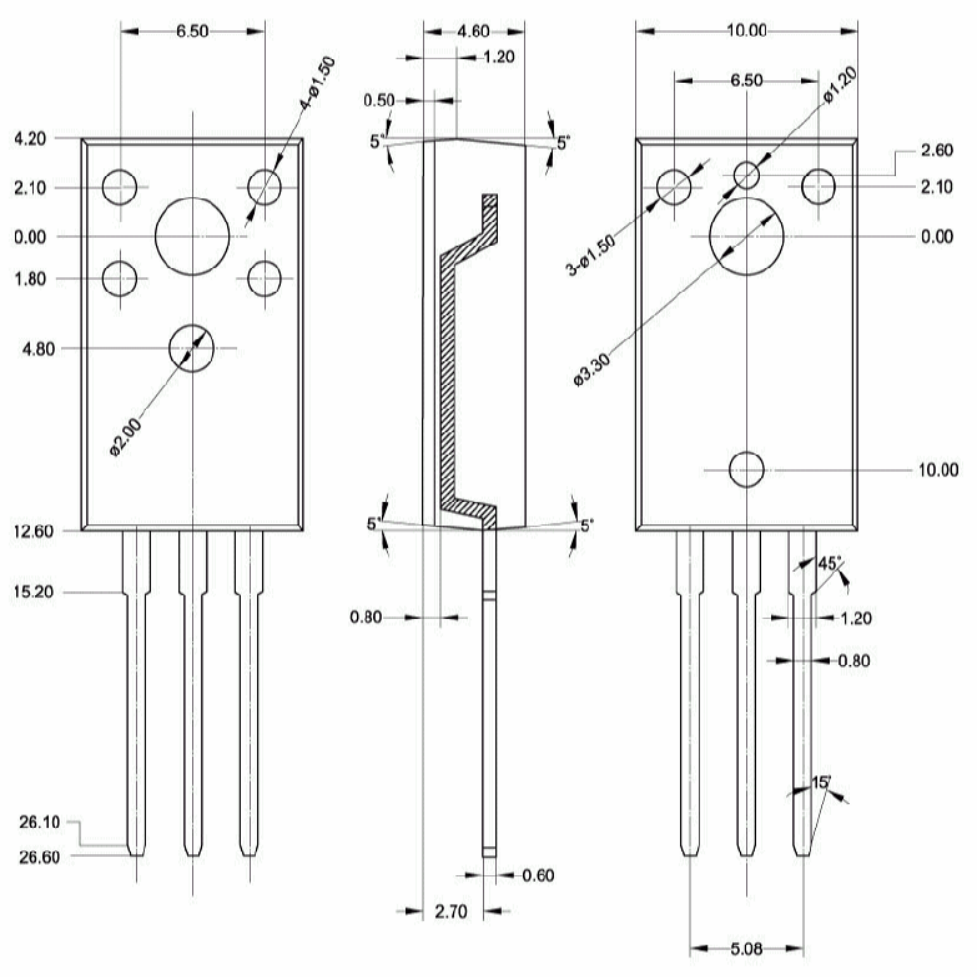

Fig.2 Outline dimensions (unindicated tolerance:±0.20 mm)