Silicon NPN Power Transistors 2SC5271

DESCRIPTION

·With TO-220F package

APPLICATIONS

·For resonant switching regulator and general purpose applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

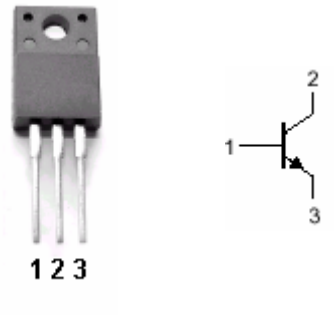

Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	300	V
V_{CEO}	Collector-emitter voltage	Open base	200	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		5	A
I_{CM}	Collector current-peak		10	A
I_B	Base current		2	A
P_C	Collector power dissipation	T_C=25□	30	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=10mA; I_B=0	200			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=2.5A;I_B=0.5A			1.0	V
V_{BEsat}	Base-emitter saturation voltage	I_C=2.5A;I_B=0.5A			1.5	V
I_{CBO}	Collector cut-off current	V_{CB}=300V; 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=2.5A ; V_{CE}=2V	10		30	
h_{FE-2}	DC current gain	I_C=1mA ; V_{CE}=2V	15			
f_T	Transition frequency	I_E=-0.5A ; V_{CE}=12V		10		MHz
C_{OB}	Output capacitance	V_{CB}=10V;f=1MHz		45		pF

Switching times

t_{on}	Turn-on time	I_C=2.5A;I_{B1}=0.5A;I_{B2}=-1.0A R_L=60Ω;V_{CC}=150V			0.3	μs
t_{stg}	Storage time				1.0	μs
t_f	Fall time				0.1	μs

PACKAGE OUTLINE

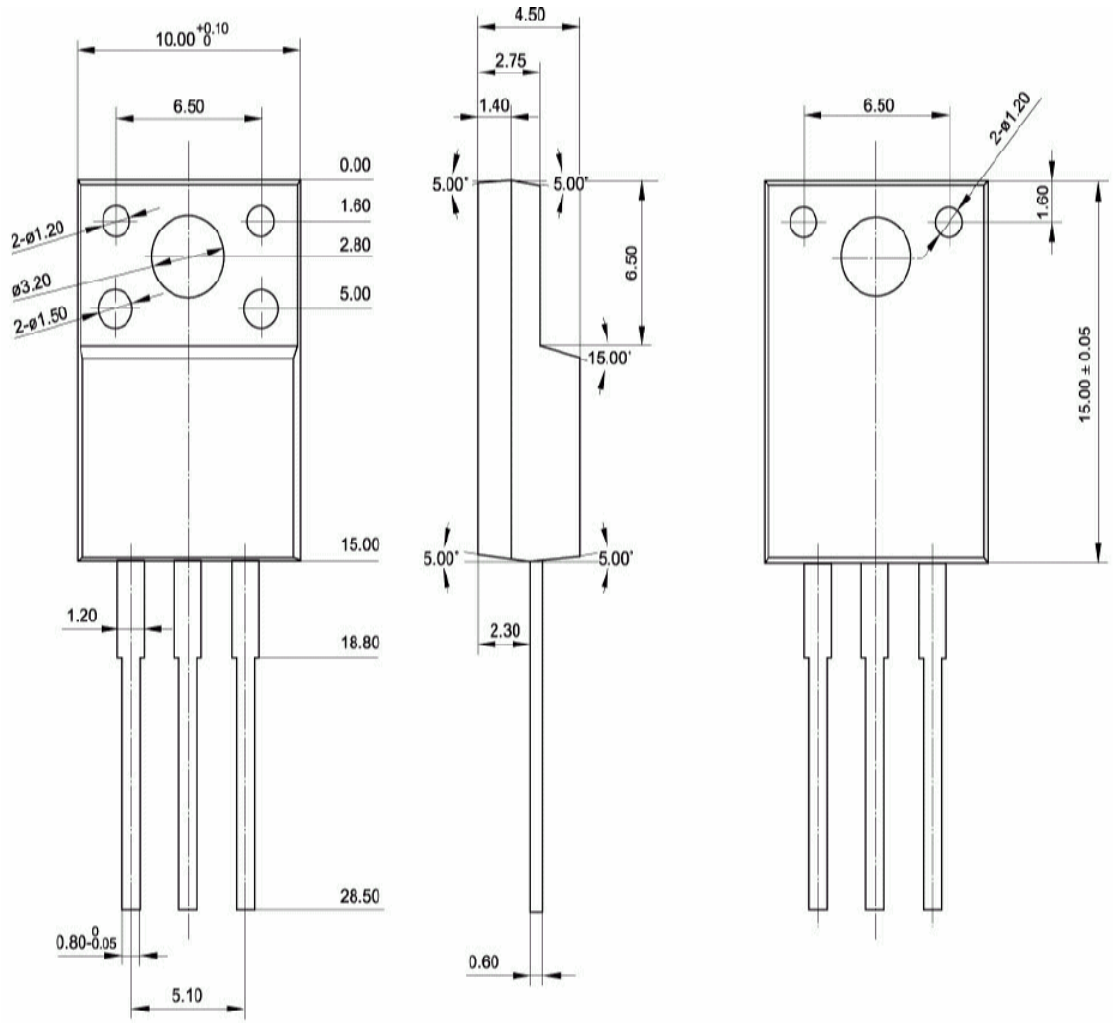

Fig.2 Outline dimensions