Silicon NPN Power Transistors 2N5869 2N5870

DESCRIPTION

·With TO-3 package
·Low collector saturation voltage

APPLICATIONS

·For medium-speed switching and amplifier applications

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

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

Absolute maximum ratings(Ta=□)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N5869	Open emitter	60	V
		2N5870		80	
V_{CEO}	Collector-emitter voltage	2N5869	Open base	60	V
		2N5870		80	
V_{EBO}	Emitter-base voltage		Open collector	5	V
I_C	Collector current			5	A
P_D	Total Power Dissipation		T_C=25□	87.5	W
T_j	Junction temperature			150	□
T_{stg}	Storage temperature			-65~200	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j\text{-}c}$	Thermal resistance junction to case	1.17	□/W

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	2N5869	I_C=0.1A ;I_B=0	60			V
		2N5870		80			
V_{CEsat}	Collector-emitter saturation voltage		I_C=5A;I_B=1A			1.0	V
V_{BEsat}	Base-emitter saturation voltage		I_C=5A; I_B=1A			1.5	V
I_{CBO}	Collector cut-off current		V_{CB}=ratedV_{CBO}; I_B=0			1.0	mA
I_{CEO}	Collector cut-off current	2N5869	V_{CE}=30V; I_B=0			2.0	mA
		2N5870	V_{CE}=40V; I_B=0				
I_{EBO}	Emitter cut-off current		V_{EB}=5V; I_C=0			1.0	mA
h_{FE}	DC current gain		I_C=1.5A ; V_{CE}=4V	20		100	
f_T	Trainsistion frequency		I_C=0.5A ; V_{CE}=10V;f=1MHz	4			MHz

PACKAGE OUTLINE

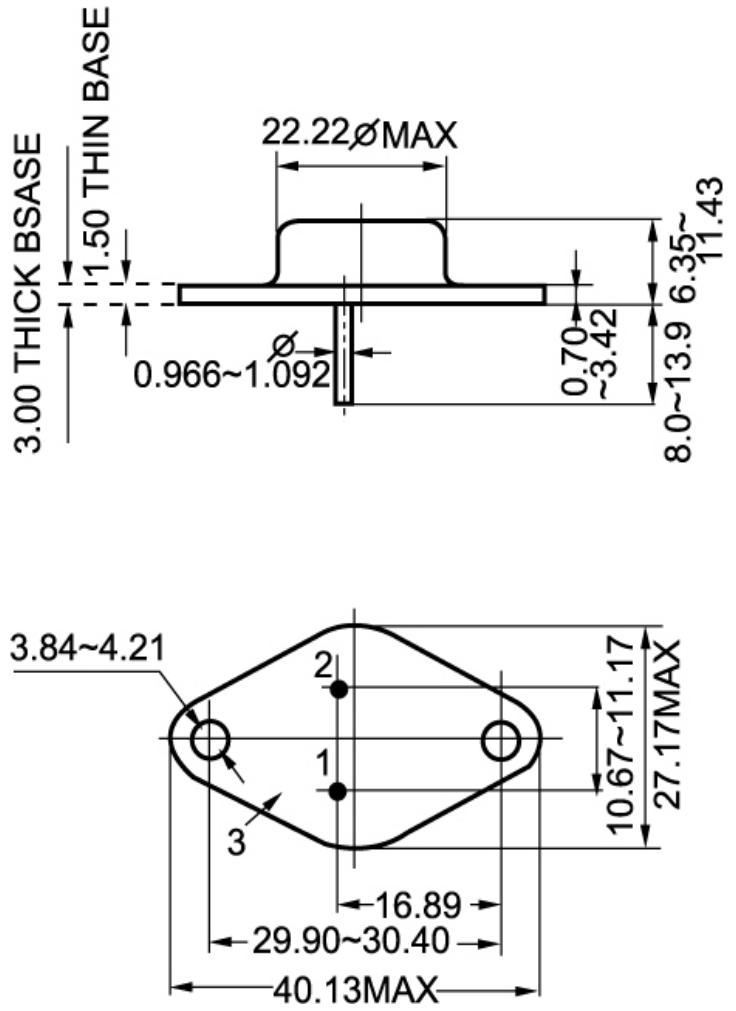

Fig.2 outline dimensions (unindicated tolerance:±0.10mm)