Silicon NPN Power Transistors 2SC3060

DESCRIPTION

·With TO-3 package
·Ultra-fast switching
·Wide area of safe operation
·High breakdown voltage

APPLICATIONS

·Switching regulators
·Motor controls
·Ultrasonic oscillators
·Class C and D amplifiers
·Deflection circuits



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

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

ABSOLUTE MAXIMUM RATINGS(T_C=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1200	V
V_{CEO}	Collector-emitter voltage	Open base	850	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		5	A
I_{CP}	Collector current-pulse	PW≤25μs,Duty cycle≤50%	8	A
I_B	Base current		3	A
P_C	Collector power dissipation	T_C=25□	150	W
T_j	Junction temperature		175	□
T_{stg}	Storage temperature		-65~175	□

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CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=10mA ;R_{BE}=∞	850			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=1mA; I_E=0	1200			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=1mA; I_C=0	7			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=2A; I_B=0.4A			1.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C=2A; I_B=0.4A			2.0	V
I_{CBO}	Collector cut-off current	V_{CB}=1000V; I_E=0			100	μA
		V_{CB}=1000V; I_E=0, T_C=100□			1	mA
I_{EBO}	Emitter cut-off current	V_{EB}=6V; I_C=0			100	μA
h_{FE}	DC current gain	I_C=2A ; V_{CE}=5V	10		30	
f_T	Transition frequency	I_C=0.5A ; V_{CE}=10V		15		MHz
C_{ob}	Output capacitance	I_E=0; V_{CB}=10V,f=1MHz		120		pF

Switching times

t_r	Rise time	V_{CC}=400V; I_C=2A I_{B1}=0.2A;I_{B2}=-0.6A;			0.5	μs
t_{stg}	Storage time				3.5	μs
t_f	Fall time				0.3	μs

PACKAGE OUTLINE

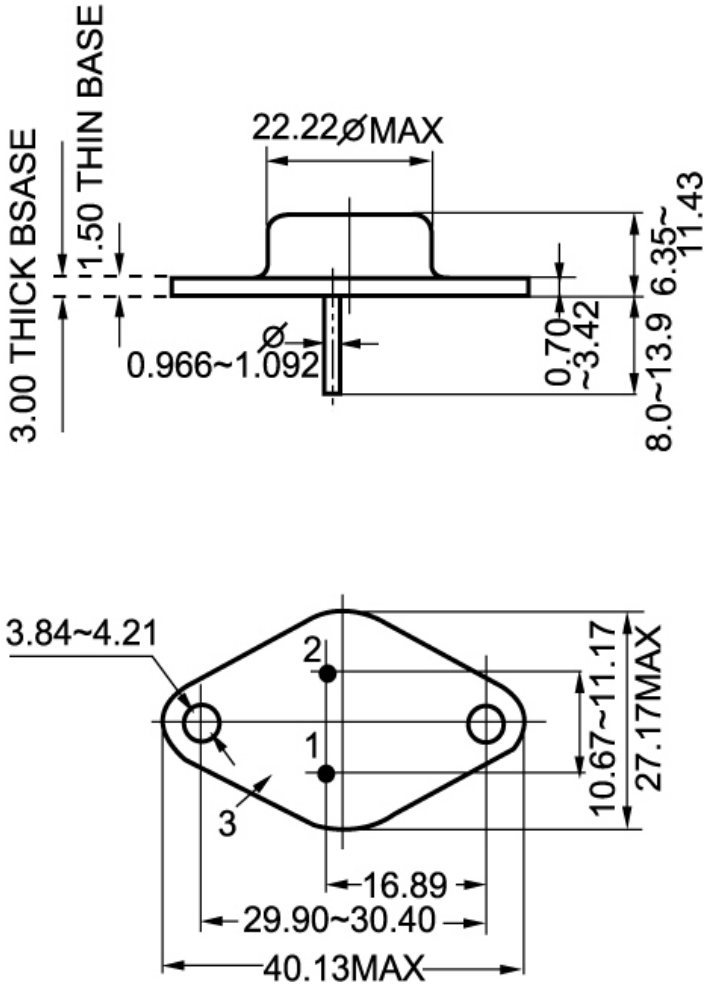


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)