

Silicon NPN Power Transistor

DESCRIPTION

- High Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V$ (Min)
- High Switching Speed

APPLICATIONS

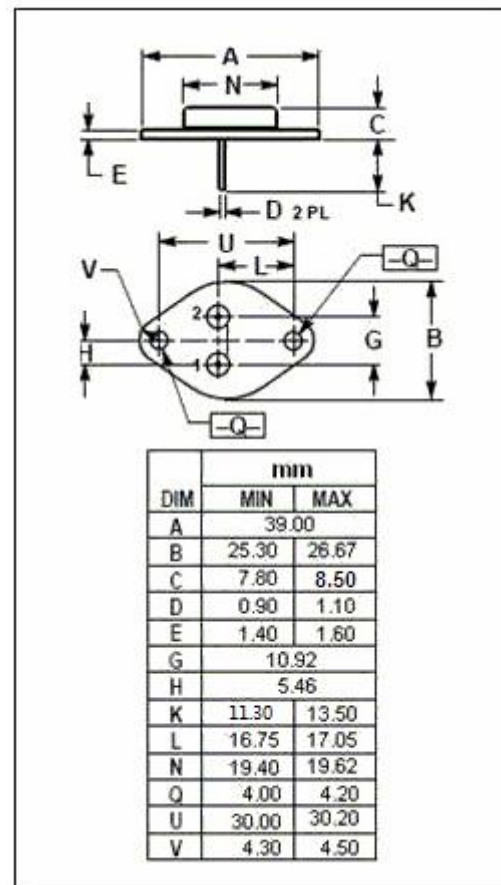
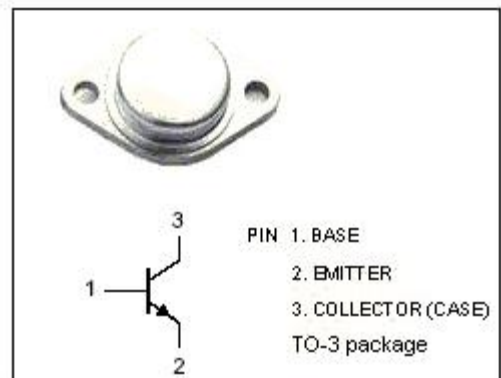
- Power switching
- Power amplification
- Power driver

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ C$)

SYMBOL	PARAMETER	MAX	UNIT
V_{CBO}	Collector-Base Voltage	450	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	30	A
I_B	Base Current-Continuous	6	A
P_C	Collector Power Dissipation @ $T_c=25^\circ C$	100	W
T_j	Junction Temperature	200	$^\circ C$
T_{stg}	Storage Temperature Range	-65~200	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.0	$^\circ C/W$



Ordering Information

Product	Package	Packaging
2SC2246T3BL	TO-3	Box



ELECTRICAL CHARACTERISTICS

$T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=50\text{mA}$; $L=25\text{mH}$	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=6\text{A}$; $I_B=1.2\text{A}$			1.2	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=6\text{A}$; $I_B=1.2\text{A}$			1.5	V
h_{FE}	DC Current Gain	$I_C=5\text{A}$; $V_{CE}=2\text{V}$	12		60	
h_{FE}	DC Current Gain	$I_C=10\text{A}$; $V_{CE}=2\text{V}$	6		30	
I_{CBO}	Collector Cutoff Current	$V_{CB}=450\text{V}$; $I_E=0$ $T_c=125^{\circ}\text{C}$			1.0 4.0	mA
I_{CEO}	Collector Cutoff Current	$V_{CE}=400\text{V}$; $I_B=0$			5.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}$; $I_C=0$			1.0	mA

Switching Times

t_r	Rise Time	$I_C=6\text{A}$; $I_{B1}=-I_{B2}=1.2\text{A}$			1.0	μs
t_{stg}	Storage Time				2.0	μs
t_f	Fall Time				1.0	μs