

**SPTECH Silicon NPN Power Transistor**

**2SC2246**

**DESCRIPTION**

- High Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 600V$  (Min)
- High Switching Speed

**APPLICATIONS**

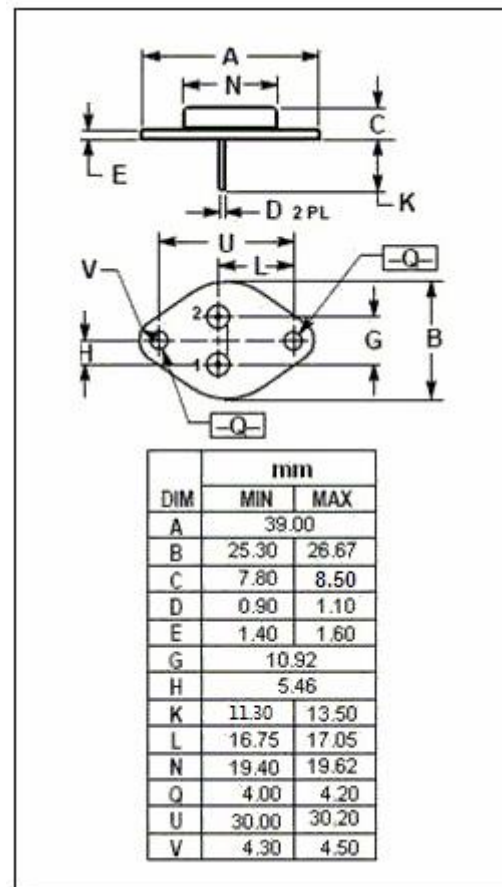
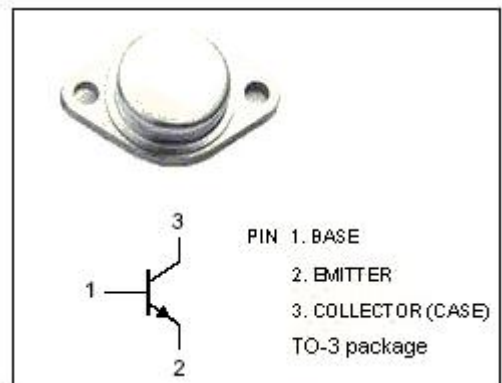
- Power switching
- Power amplification
- Power driver

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

SYMBOL	PARAMETER	MAX	UNIT
$V_{CBO}$	Collector-Base Voltage	1000	V
$V_{CEO}$	Collector-Emitter Voltage	600	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	20	A
$I_{CM}$	Collector Current-Peak	40	A
$I_B$	Base Current-Continuous	6	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ C$	150	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	$^\circ C/W$



**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	$I_C= 50\text{mA}$ ; $L= 25\text{mH}$	600			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	$V_{CB}= 1000\text{V}$ ; $I_E= 0$ $T_C=125^{\circ}\text{C}$			1.0 4.0	mA
$I_{CEO}$	Collector Cutoff Current	$V_{CE}= 600\text{V}$ ; $I_B= 0$			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	$\mu\text{s}$
$t_{stg}$	Storage Time				2.0	$\mu\text{s}$
$t_f$	Fall Time				1.0	$\mu\text{s}$