

SPTECH Silicon NPN Power Transistor

2SD111

DESCRIPTION

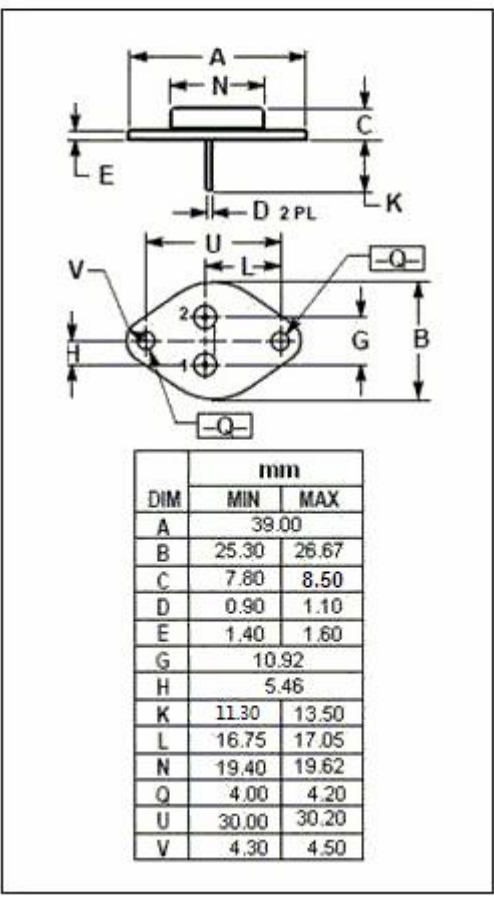
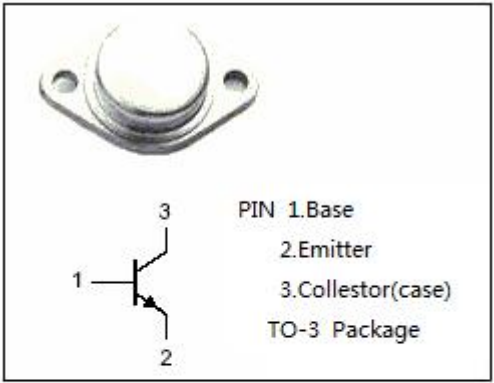
- High Power Dissipation-
: $P_C= 100W@T_C= 25^{\circ}C$
- High Current Capability-
: $I_C = 10A$

APPLICATIONS

- Designed for power amplifier , power switching ,DC-DC converter and regulator applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	10	A
I_E	Emitter Current-Continuous	10	A
I_B	Base Current-Continuous	3	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}C$	100	W
T_J	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature	-65~150	$^{\circ}C$



SPTECH Silicon NPN Power Transistor**2SD111****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA ; R _{BE} = ∞	80			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA ; I _C = 0	10			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 1A			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 1A			2.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 50V; I _E = 0			0.5	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 10V; I _C =0			10	mA
h _{FE-1}	DC Current Gain	I _C = 1A; V _{CE} = 5V	30		300	
h _{FE-2}	DC Current Gain	I _C = 5A; V _{CE} = 5V	10			
f _T	Current-Gain—Bandwidth Product	I _C = 1A ; V _{CE} = 10V		1		MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 50V; f= 1MHz		200		pF

◆ **h_{FE-2} Classifications**

R	O	Y
30-90	50-150	100-300