

SPTECH Product Specification

SPTECH Silicon NPN Power Transistor

NJW3281G

DESCRIPTION

- With TO-3PN packaging
- Reliable performance at higher powers
- Accurate reproduction of Input signal
- Greater dynamic range
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

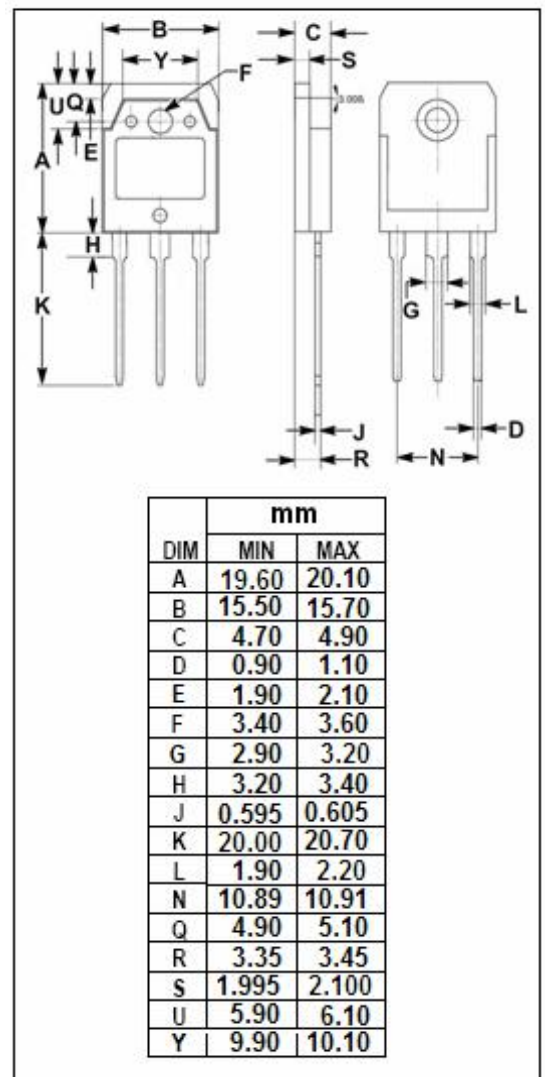
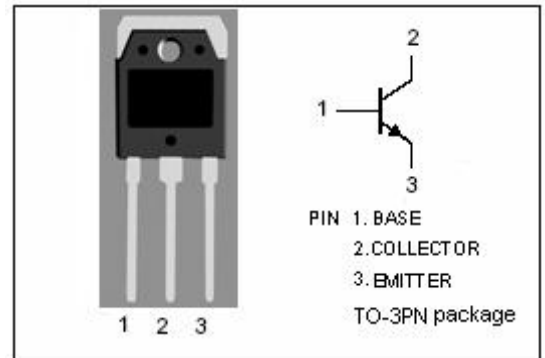
- Switching regulators
- High frequency inverters
- General purpose power amplifiers

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	250	V
V_{CEO}	Collector-Emitter Voltage	250	V
V_{CEX}	Collector-Emitter Voltage $V_{EB}=5V$	250	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	1.6	A
P_T	Total Power Dissipation @ $T_C=25^{\circ}\text{C}$	200	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.63	$^{\circ}\text{C/W}$



ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 100\text{mA}; I_B= 0$	250			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 8\text{A}; I_B= 0.8\text{A}$			0.6	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 8\text{A}; V_{CE}= 5\text{V}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}= 250\text{V}$			50	mA
I_{CEO}	Collector Cutoff Current	$V_{CE}= 250\text{V}$			50	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 5\text{V}$			5	mA
h_{FE-1}	DC Current Gain	$I_C= 0.1\text{A}; V_{CE}= 5\text{V}$	75		150	
h_{FE-2}	DC Current Gain	$I_C= 1\text{A}; V_{CE}= 5\text{V}$	75		150	
h_{FE-3}	DC Current Gain	$I_C= 3\text{A}; V_{CE}= 5\text{V}$	75		150	
h_{FE-4}	DC Current Gain	$I_C= 5\text{A}; V_{CE}= 5\text{V}$	60			
h_{FE-5}	DC Current Gain	$I_C= 8\text{A}; V_{CE}= 5\text{V}$	45			