

DESCRIPTION

- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 1.0V(\text{Max.}) @ I_C = 7A$
- DC Current Gain-
: $h_{FE} = 20-100 @ I_C = 6A$
- Complement to Type 2N5880

APPLICATIONS

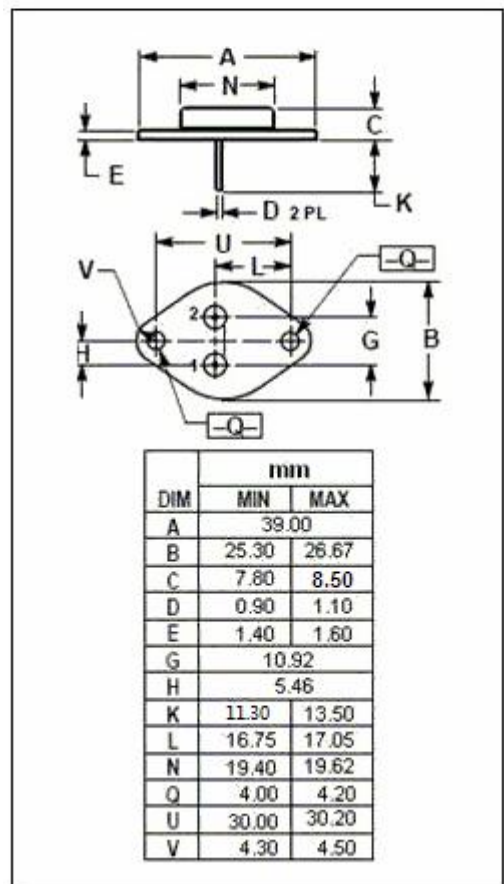
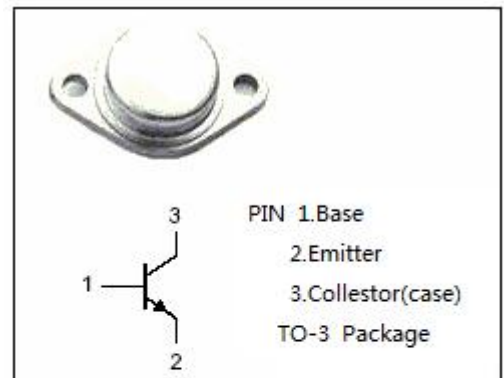
- Designed for general-purpose power amplifier and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	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	5	A
P_C	Collector Power Dissipation@ $T_c = 25^\circ\text{C}$	160	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.1	$^\circ\text{C}/\text{W}$



SPTECH Silicon NPN Power Transistors

2N5882

ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=50\text{mA}$; $I_B=0$	80		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=7\text{A}$; $I_B=0.7\text{A}$		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=15\text{A}$; $I_B=3.75\text{A}$		4.0	v
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=15\text{A}$; $I_B=3.75\text{A}$		2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=6\text{A}$; $V_{CE}=4\text{V}$		1.5	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=40\text{V}$; $I_B=0$		1.0	mA
I_{CEX}	Collector Cutoff Current	$V_{CE}=80\text{V}$; $V_{BE(off)}=1.5\text{V}$; $V_{CE}=80\text{V}$; $V_{BE(off)}=1.5\text{V}$; $T_C=150^{\circ}\text{C}$		0.5 5.0	mA
I_{CBO}	Collector Cutoff Current	$V_{CB}=80\text{V}$; $I_E=0$		0.5	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}$; $I_C=0$		1.0	mA
h_{FE-1}	DC Current Gain	$I_C=2\text{A}$; $V_{CE}=4\text{V}$	35		
h_{FE-2}	DC Current Gain	$I_C=6\text{A}$; $V_{CE}=4\text{V}$	20	100	
h_{FE-3}	DC Current Gain	$I_C=15\text{A}$; $V_{CE}=4\text{V}$	4		
f_T	Current-Gain—Bandwidth Product	$I_C=1\text{A}$; $V_{CE}=10\text{V}$; $f_{test}=1.0\text{MHz}$	4		MHz