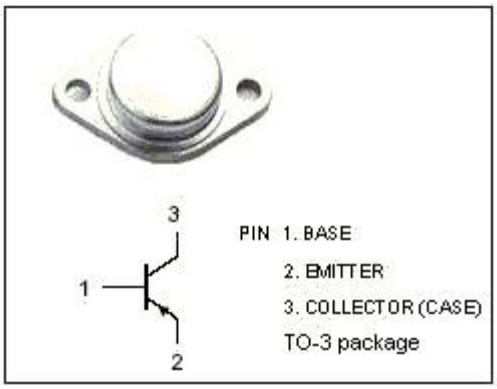
SPTECH Silicon PNP Power Transistors

DESCRIPTION

- DC Current Gain-
  : h_{FE}= 20(Min)@I_C=-10A
- Low Saturation Voltage-
  : $V_{CE(sat)}$=-1.0V(Max)@ I_C=-15A
- Complement to Type 2N5885/5886

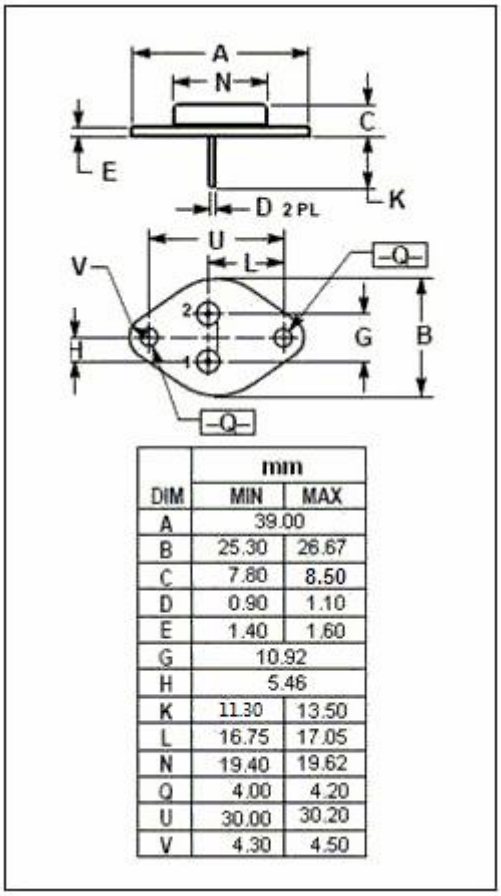


APPLICATIONS

- Designed for general purpose power amplifier and switching applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	2N5883	-60	V
		2N5884	-80	
V_{CEO}	Collector-Emitter Voltage	2N5883	-60	V
		2N5884	-80	
V_{EBO}	Emitter-Base Voltage		-5	V
I_C	Collector Current-Continuous		-25	A
I_{CM}	Collector Current-Peak		-50	A
I_B	Base Current-Continuous		-7.5	A
P_C	Collector Power Dissipation @T_C=25℃		200	W
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature		-65~150	℃



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	0.875	℃/W

SPTECH Silicon PNP Power Transistors

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	2N5883	I_C=-50mA ; I_B= 0	-60		V
		2N5884		-80		
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage		I_C=-15A; I_B=-1.5A		-1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage		I_C=-25A; I_B=-6.25A		-4.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage		I_C=-25A; I_B=-6.25A		-2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage		I_C=-10A ; V_{CE}=-4V		-1.5	V
I_{CEO}	Collector Cutoff Current	2N5883	V_{CE}=-30V; I_B= 0		-2.0	mA
		2N5884	V_{CE}=-40V; I_B= 0		-2.0	
I_{CEX}	Collector Cutoff Current	2N5883	V_{CE}=-60V; $V_{BE(off)}$= 1.5V V_{CE}=-60V; $V_{BE(off)}$= 1.5V,T_C=150℃		-1.0 -10	mA
		2N5884	V_{CE}=-80V; $V_{BE(off)}$= 1.5V V_{CE}=-80V; $V_{BE(off)}$= 1.5V,T_C=150℃		-1.0 -10	
I_{CBO}	Collector Cutoff Current	2N5883	V_{CB}=-60V; I_E= 0		-1.0	mA
		2N5884	V_{CB}=-80V; I_E= 0		-1.0	
I_{EBO}	Emitter Cutoff Current		V_{EB}=-5V; I_C=0		-1.0	mA
h_{FE-1}	DC Current Gain		I_C=-3A ; V_{CE}=-4V	35		
h_{FE-2}	DC Current Gain		I_C=-10A ; V_{CE}=-4V	20	100	
h_{FE-3}	DC Current Gain		I_C=-25A ; V_{CE}=-4V	4		
C_{OB}	Output Capacitance		I_E= 0;V_{CB}=-10V;f_{test}= 1MHz		500	pF
f_T	Current-Gain—Bandwidth Product		I_C=-1A ; V_{CE}=-10V ;f_{test}= 1MHz	4		MHz
Switching Times						
t_r	Rise Time		I_C=-10A; I_{B1}= -I_{B2}=-1A;V_{CC}= -30V		0.7	μs
t_{stg}	Storage Time				1.0	μs
t_f	Fall Time				0.8	μs