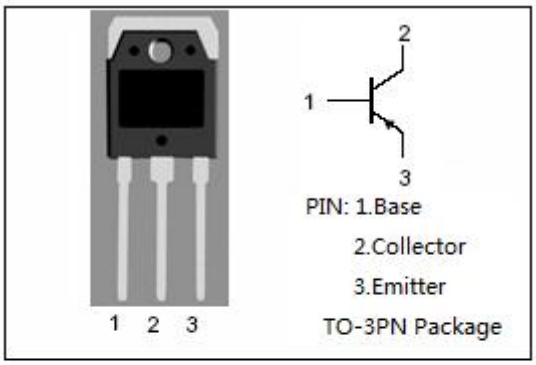
SPTECH Silicon PNP Power Transistor

DESCRIPTION

- Collector Current -I_C= -10A
- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$ = -45V(Min)- BD246; -60V(Min)- BD246A
  -80V(Min)- BD246B; -100V(Min)- BD246C
- Complement to Type BD245/A/B/C

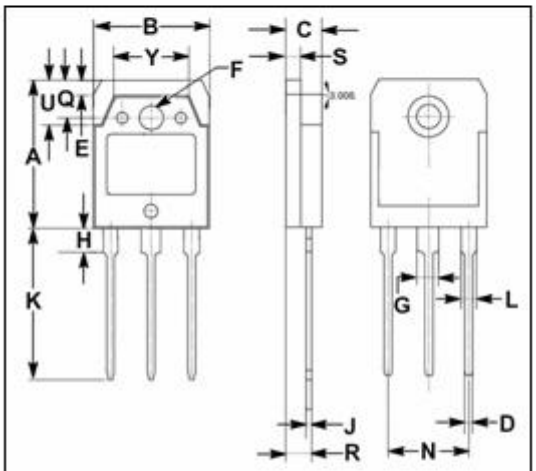
APPLICATIONS

- Designed for use in general purpose power amplifier and switching applications



ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CER}	Collector-Emitter Voltage (R_{BE}= 100Ω)	BD246	-55	V
		BD246A	-70	
		BD246B	-90	
		BD246C	-115	
V_{CEO}	Collector-Emitter Voltage	BD246	-45	V
		BD246A	-60	
		BD246B	-80	
		BD246C	-100	
V_{EBO}	Emitter-Base Voltage		-5	V
I_C	Collector Current-Continuous		-10	A
I_{CM}	Collector Current-Peak		-15	A
I_B	Base Current		-3	A
P_C	Collector Power Dissipation @ T_a=25℃		3	W
	Collector Power Dissipation @ T_C=25℃		80	
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature Range		-65~150	℃



DIM	mm MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	1.56	℃/W

SPTECH Silicon PNP Power Transistor

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	BD246	I_C= -30mA ;I_B=0	-45			V
		BD246A		-60			
		BD246B		-80			
		BD246C		-100			
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage		I_C= -3A; I_B= -0.3A			-1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage		I_C= -10A; I_B= -2.5A			-4.0	V
$V_{BE(on)-1}$	Base-Emitter On Voltage		I_C= -3A ; V_{CE}= -4V			-1.6	V
$V_{BE(on)-2}$	Base-Emitter On Voltage		I_C= -10A ; V_{CE}= -4V			-3.0	V
I_{CES}	Collector Cutoff Current	BD246	V_{CE}= -55V; V_{BE}= 0			-0.4	mA
		BD246A	V_{CE}= -70V; V_{BE}= 0				
		BD246B	V_{CE}= -90V; V_{BE}= 0				
		BD246C	V_{CE}= -115V; V_{BE}= 0				
I_{CEO}	Collector Cutoff Current	BD246/A	V_{CE}= -30V;I_B= 0			-0.7	mA
		BD246B/C	V_{CE}= -60V;I_B= 0				
I_{EBO}	Emitter Cutoff Current		V_{EB}= -5V; I_C= 0			-1.0	mA
h_{FE-1}	DC Current Gain		I_C= -1A ; V_{CE}= -4V	40			
h_{FE-2}	DC Current Gain		I_C= -3A ; V_{CE}= -4V	20			
h_{FE-3}	DC Current Gain		I_C= -10A ; V_{CE}= -4V	4			
f_T	Current-Gain—Bandwidth Product		I_C= -0.5A;V_{CE}= -10V,f_{test}= 1.0MHz	3.0			MHz
Switching times							
t_{on}	Turn-on Time		I_C= -1A; I_{B1}= -I_{B2}= -0.1A; R_L=20Ω ; $V_{BE(OFF)}$= 3.7V		0.2		μs
t_{off}	Turn-off Time				0.8		μs