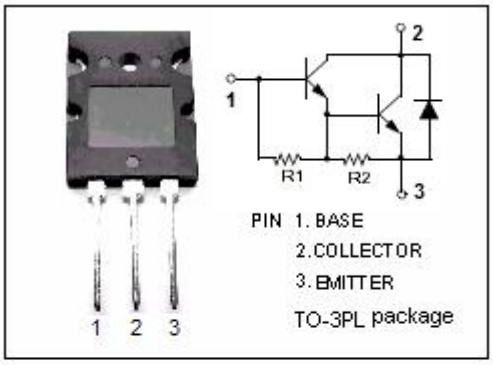
SPTECH Silicon NPN Darlington Power Transistor



DESCRIPTION

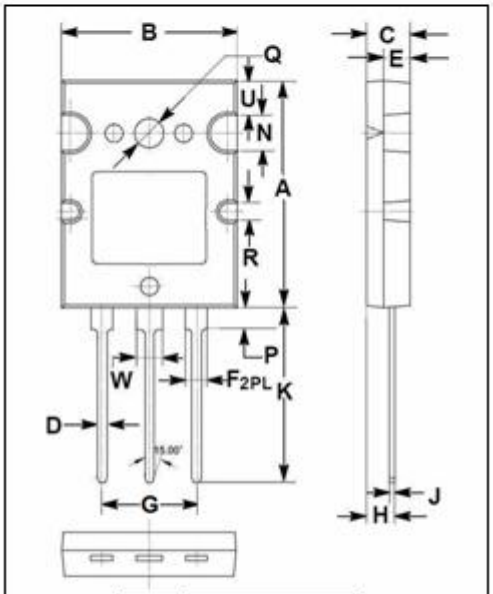
- High DC Current Gain
  : h_{FE}= 1000(Min.)@ I_C= 20A
- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$ = 100V(Min.)

APPLICATIONS

- Designed for high current switching applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	30	A
I_B	Base Current- Continuous	5	A
P_C	Collector Power Dissipation @T_C=25℃	150	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	25.50	26.50
B	19.80	20.20
C	4.50	5.50
D	0.90	1.10
E	2.80	3.20
F	2.40	2.60
G	10.80	11.00
H	3.10	3.30
J	0.50	0.70
K	20.00	21.00
N	3.90	4.50
P	2.40	2.60
Q	3.10	3.50
R	1.90	2.60
U	3.90	4.10
W	2.90	3.25

SPTECH Silicon NPN Darlington Power Transistor

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 30mA, I_B= 0	100			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 20A, I_B= 0.2A			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 20A, I_B= 0.2A			2.5	V
I_{CBO}	Collector Cutoff current	V_{CB}= 100V, I_E= 0			0.1	mA
I_{EBO}	Emitter Cutoff current	V_{EB}= 5V, I_C= 0			10	mA
h_{FE-1}	DC Current Gain	I_C= 20A; V_{CE}= 5V	1000			
h_{FE-2}	DC Current Gain	I_C= 30A; V_{CE}= 5V	200			
V_{ECF}	C-E Diode Forward Voltage	I_F= 10A			3.0	V
f_T	Current-Gain—Bandwidth Product	I_C= 1A; V_{CE}= 5V		10		MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 1MHz		500		pF
Switching Times						
t_{on}	Turn-On Time	I_{B1} = I_{B2}= 10mA; V_{CC}= 50V; R_L= 10Ω		1.5		μs
t_{stg}	Storage Time			10		μs
t_f	Fall Time			1.5		μs