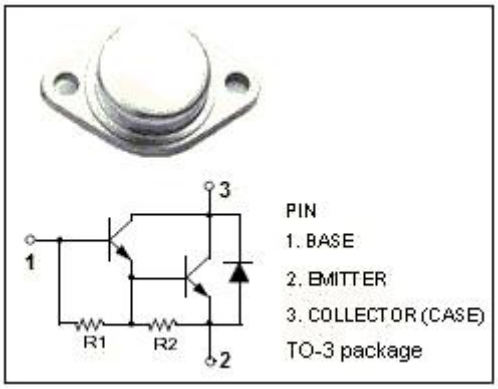
SPTECH Silicon NPN Darlington Power Transistor

DESCRIPTION

- Collector-Emitter Breakdown Voltage
  : $V_{(BR)CEO}$= 90V(Min.)
- High DC Current Gain-
  : h_{FE}= 1000(Min.)@I_C= 25A
  : h_{FE}= 400(Min.)@I_C= 50A
- Complement to the PNP MJ11031

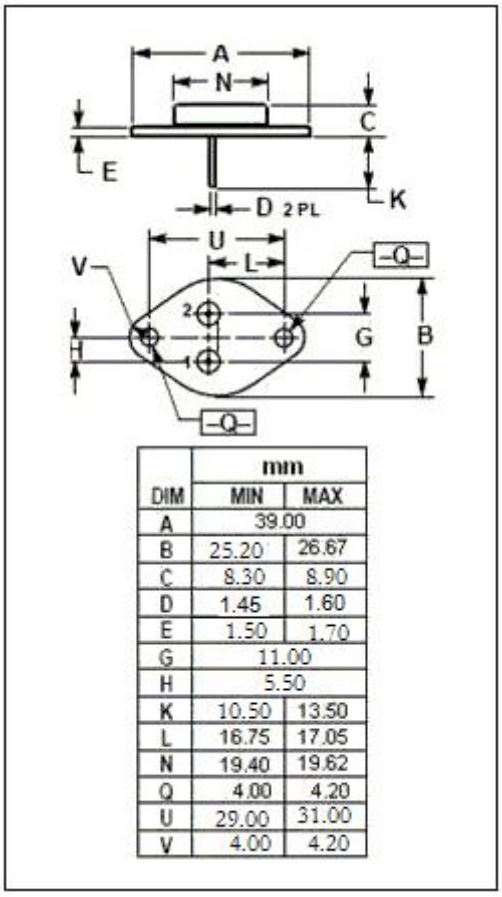


APPLICATIONS

- Designed for use as output devices in complementary general purpose amplifier applications.

ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	90	V
V_{CEO}	Collector-Emitter Voltage	90	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continunous	50	A
I_{CM}	Collector Current-Peak	100	A
I_B	Base Current-Continunous	2	A
P_C	Collector Power Dissipation @T_C=25℃	300	W
T_j	Junction Temperature	200	℃
T_{stg}	Storage Temperature Range	-55~+200	℃



DIM	mm MIN	MAX
A	39.00	
B	25.20	26.67
C	8.30	8.90
D	1.45	1.60
E	1.50	1.70
G	11.00	
H	5.50	
K	10.50	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	29.00	31.00
V	4.00	4.20

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	0.584	℃/W

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= 50mA; I_B= 0	90			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 25A; I_B= 250mA			2.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 50A; I_B= 500mA			3.5	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 25A; I_B= 250mA			3.0	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 50A; I_B= 500mA			4.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 90V;I_E=0 V_{CB}= 90V;I_E=0; T_C=150℃			2.0 5.0	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 50V; I_B= 0			2.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			5.0	mA
h_{FE-1}	DC Current Gain	I_C= 25A, V_{CE}= 5V	1000		18000	
h_{FE-2}	DC Current Gain	I_C= 50A, V_{CE}= 5V	400			