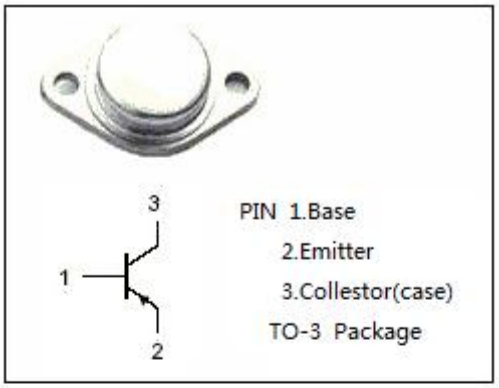
SPTECH Silicon PNP Power Transistors

DESCRIPTION

- Complement to Type NPN MJ15022/15024
- Excellent Safe Operating Area
- High DC current Gain

APPLICATIONS

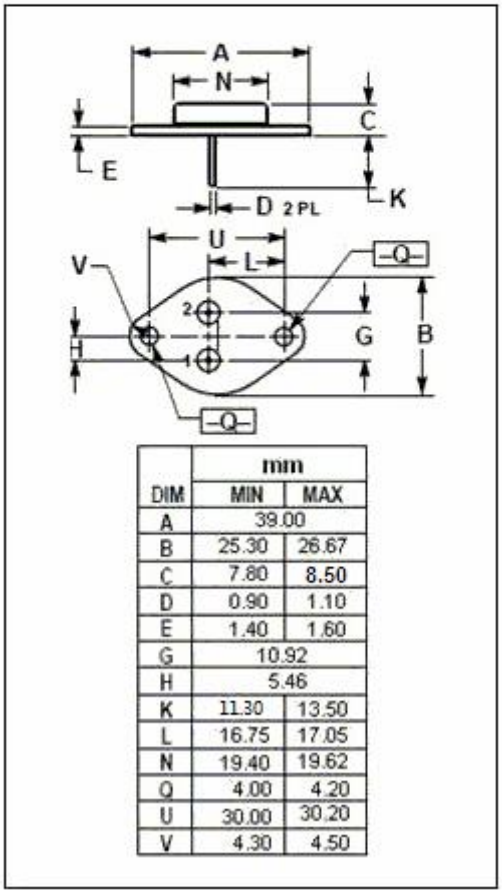
- Designed for high power audio, disk head positioners and other linear applications



ABSOLUTE MAXIMUM RATINGS(T_C=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	MJ15023	-350	V
		MJ15025	-400	
V_{CEO}	Collector-Emitter Voltage	MJ15023	-200	V
		MJ15025	-250	
V_{EBO}	Emitter-Base Voltage		-5	V
I_C	Collector Current-Continuous		-16	A
(1) I_{CM}	Collector Current-Peak		-30	A
I_B	Base Current-Continuous		-5	A
P_D	Total Power Dissipation @T_C=25℃		250	W
T_j	Junction Temperature		-65~200	℃
T_{stg}	Storage Temperature		-65~200	℃
SYMBOL	**PARAMETER**		**MAX**	**UNIT**
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case		0.70	℃/W

(1) Pulse Test: Pulse Width = 5 ms, Duty Cycle _ 10%.



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

SPTECH Silicon PNP Power Transistors

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$ (1)	Collector-Emitter Sustaining Voltage	MJ15023	I_C= -50mA ;I_B= 0	-200		V
		MJ15025		-250		
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage		I_C= -8A; I_B= -0.8A		-1.4	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage		I_C= -16A; I_B= -3.2A		-4.0	V
$V_{BE(on)}$	Base-Emitter On Voltage		I_C= -8A ; V_{CE}= -4V		-2.2	V
I_{CEO}	Collector Cutoff Current	MJ15023	V_{CE}= -150V; I_B= 0		-0.5	mA
		MJ15025	V_{CE}= -200V; I_B= 0			
I_{CBO}	Collector Cutoff Current	MJ15023	V_{CB}= -200V; I_E= 0		-0.25	mA
		MJ15025	V_{CB}= -250V; I_E= 0			
I_{EBO}	Emitter Cutoff Current		V_{EB}= -5V; I_C=0		-0.5	mA
h_{FE-1}	DC Current Gain		I_C= -8A ; V_{CE}= -4V	15	60	
h_{FE-2}	DC Current Gain		I_C= -16A ; V_{CE}= -4V	5		
$I_{s/b}$	Second Breakdown Collector Current With Base Forward Biased		V_{CE}= -50Vdc,t=0.5 s, Nonrepetitive V_{CE}= -80Vdc,t=0.5 s,Nonrepetitive	-5.0 -2.0		A
C_{OB}	Output Capacitance		I_E= 0 ; V_{CB}= 10V; f_{test}= 1.0MHz	300		pF
f_T	Current-Gain—Bandwidth Product		I_C= -1A ; V_{CE}= -10V; f_{test}= 1.0MHz	4		MHz

(1) Pulse Test: Pulse Width = 5 ms, Duty Cycle _ 10%.