

DESCRIPTION

- Complement to Type PNP MJ15023/15025
- Excellent Safe Operating Area
- High DC current Gain

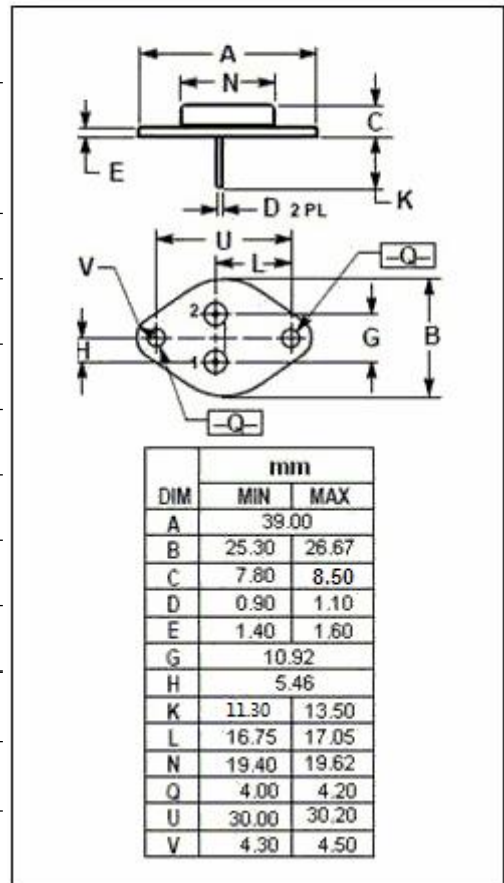
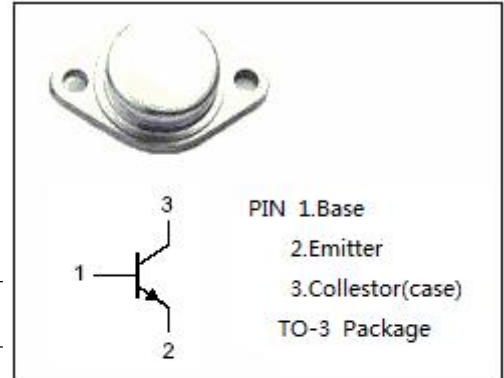
APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS($T_c=25^\circ\text{C}$)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	MJ15022	350	V
		MJ15024	400	
V_{CEO}	Collector-Emitter Voltage	MJ15022	200	V
		MJ15024	250	
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current-Continuous		16	A
I_{CM} (1)	Collector Current-Peak		30	A
I_B	Base Current-Continuous		5	A
P_D	Total Power Dissipation @ $T_c=25^\circ\text{C}$		250	W
T_j	Junction Temperature		-65~200	$^\circ\text{C}$
T_{stg}	Storage Temperature		-65~200	$^\circ\text{C}$
SYMBOL	PARAMETER		MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case		0.70	$^\circ\text{C/W}$

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



SPTECH Silicon NPN Power Transistors MJ15022/15024

ELECTRICAL CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	MAX	UNIT
V _{CEQ(SUS)} (1)	Collector-Emitter Sustaining Voltage	MJ15022	I _C = 50mA ; I _B = 0	200		V
		MJ15024		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	MJ15022	V _{CE} = 150V; I _B = 0		0.5	mA
		MJ15024	V _{CE} = 200V; I _B = 0			
I _{CBO}	Collector Cutoff Current	MJ15022	V _{CB} = 200V; I _E = 0		0.25	mA
		MJ15024	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 = 300 μs, Duty Cycle _ 2%.