

isc Silicon PNP Power Transistors
MJ15023
DESCRIPTION

- Complement to Type NPN MJ15022
- Excellent Safe Operating Area
- High DC current Gain
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

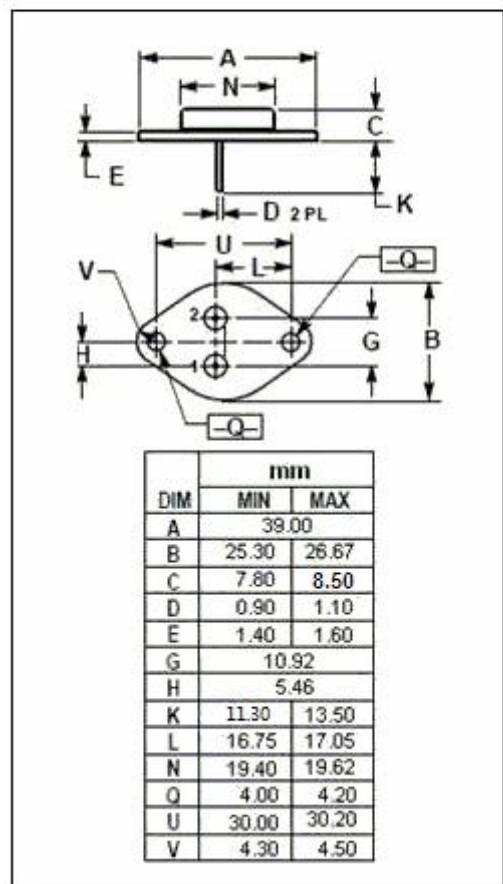
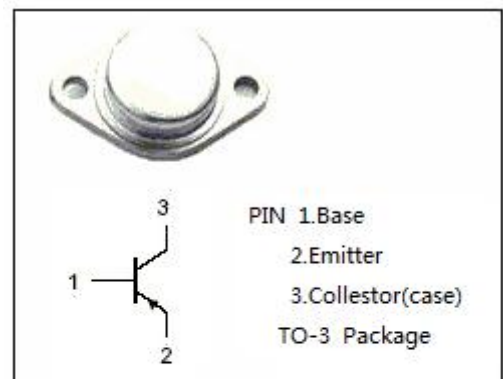
- Designed for high power audio, disk head positioners and other linear applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-350	V
V_{CEO}	Collector-Emitter Voltage	-200	V
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	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.70	$^{\circ}\text{C}/\text{W}$



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

ELECTRICAL CHARACTERISTICST_c=25°C unless otherwise specified

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

NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.