

**isc Silicon PNP Power Transistor**

**MJ15012**

**DESCRIPTION**

- Excellent Safe Operating Area
- DC Current Gain-  
:  $h_{FE} = 20(\text{Min.}) @ I_C = -2A$
- Collector-Emitter Saturation Voltage-  
:  $V_{CE(\text{sat})} = -2.5V(\text{Max}) @ I_C = -4A$
- Complement to Type MJ15011

**APPLICATIONS**

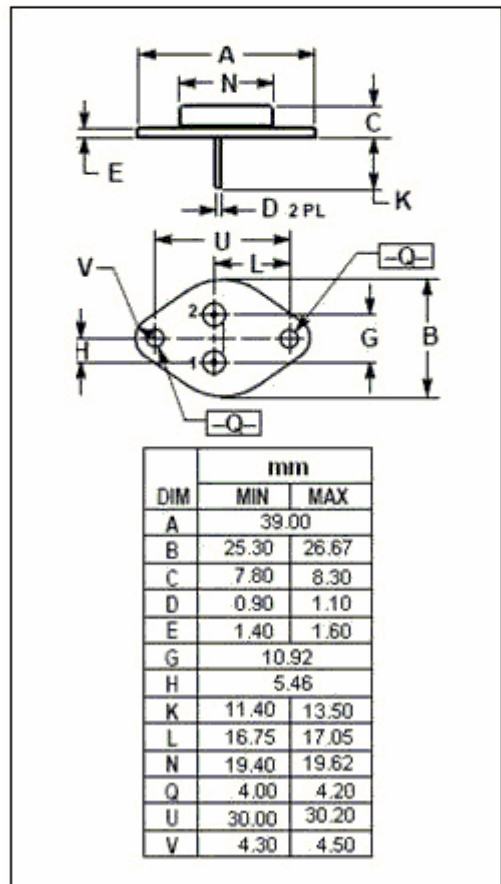
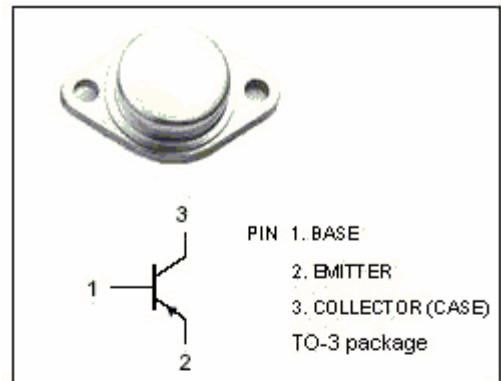
- Designed for high power audio, disk head positioners , and other linear applications. These devices can also be used in power switching circuits such as relay or solenoid drivers, DC-DC converters or inverters.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CEO(\text{SUS})}$	Collector-Emitter Voltage	-250	V
$V_{CEX}$	Collector-Emitter Voltage	-250	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-10	A
$I_{CM}$	Collector Current-Peak	-15	A
$I_B$	Base Current-Continuous	-2	A
$I_{BM}$	Base Current-Peak	-5	A
$I_E$	Emitter Current-Continuous	12	A
$I_{EM}$	Emitter Current-Peak	20	A
$P_D$	Total Power Dissipation@ $T_C=25^\circ\text{C}$	200	W
$T_j$	Junction Temperature	200	$^\circ\text{C}$
$T_{\text{stg}}$	Storage Temperature	-65~200	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{\text{th}j-c}$	Thermal Resistance,Junction to Case	0.875	$^\circ\text{C}/W$



## isc Silicon PNP Power Transistor

MJ15012

## ELECTRICAL CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = -0.1A ; I <sub>B</sub> = 0	-250		V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -2A; I <sub>B</sub> = -0.2A		-0.8	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -4A; I <sub>B</sub> = -0.4A		-2.5	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = -4A ; V <sub>CE</sub> = -2V		-2.0	V
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = -200V; I <sub>B</sub> = 0		-1.0	mA
I <sub>CEx</sub>	Collector Cutoff Current	V <sub>CE</sub> = -250V; V <sub>BE(off)</sub> = 1.5V		-0.5	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -5V; I <sub>C</sub> = 0		-0.5	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = -2A ; V <sub>CE</sub> = -2V	20	100	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = -4A ; V <sub>CE</sub> = -2V	5		
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0 ; V <sub>CB</sub> = -10V; f <sub>test</sub> = 1.0MHz		750	pF