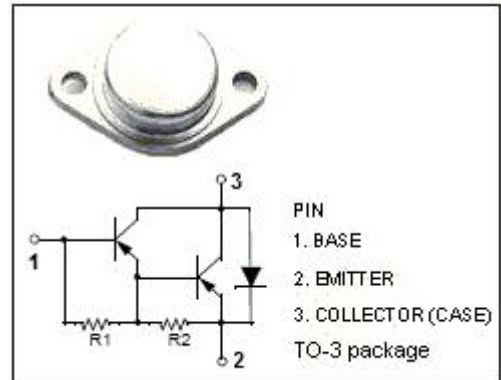


**isc Silicon PNP Darlington Power Transistor**
**MJ11015**
**DESCRIPTION**

- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -120V(\text{Min.})$
- High DC Current Gain-  
:  $h_{FE} = 1000(\text{Min.}) @ I_C = -20A$
- Low Collector Saturation Voltage-  
:  $V_{CE(sat)} = -3.0V(\text{Max.}) @ I_C = -20A$
- Complement to the NPN MJ11016
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

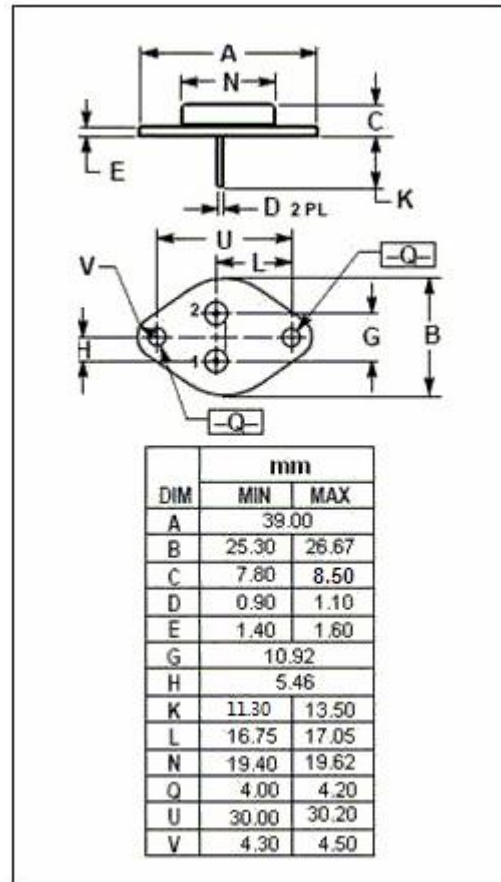
- Designed for use as output devices in complementary general purpose amplifier applications.


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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-120	V
$V_{CEO}$	Collector-Emitter Voltage	-120	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-30	A
$I_B$	Base Current-Continuous	-1	A
$P_C$	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	200	W
$T_j$	Junction Temperature	200	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~+200	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.87	$^\circ\text{C/W}$



## isc Silicon PNP Darlington Power Transistor

MJ11015

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = -50mA; I <sub>B</sub> = 0	-120			V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -20A; I <sub>B</sub> = -0.2A			-3.0	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -30A; I <sub>B</sub> = -0.3A			-4.0	V
V <sub>BE(sat)-1</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = -20A; I <sub>B</sub> = -0.2A			-3.5	V
V <sub>BE(sat)-2</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = -30A; I <sub>B</sub> = -0.3A			-5.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> =-120V; I <sub>E</sub> =0 V <sub>CB</sub> =-120V; I <sub>E</sub> =0; T <sub>C</sub> =150°C			-1.0 -5.0	mA
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = -120V; I <sub>B</sub> = 0			-1.0	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -5V; I <sub>C</sub> = 0			-5.0	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = -20A, V <sub>CE</sub> = -5V	1000			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = -30A, V <sub>CE</sub> = -5V	200			

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