

## Silicon PNP Darlington Power Transistor

### DESCRIPTION :

- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -120V(\text{Min.})$
- High DC Current Gain- $hFE=1000(\text{Min})@I_C = -20A$
- Low Saturation Voltage-  
:  $V_{CE(SAT)} = -3.0V(\text{Max})@ I_C = -20A$
- Complement to the NPN MJ11016

### APPLICATIONS :

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

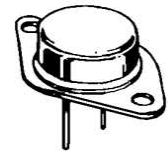
**PNP**

**MJ11015**

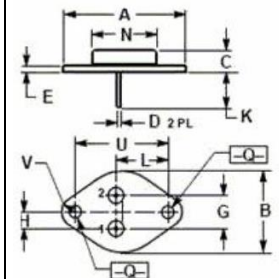
**30 AMPERES  
COMPLEMENTARY  
SILICON POWER  
DARLINGTON  
TRANSISTOR  
120 VOLTS  
200 WATTS**

### MAXIMUM RATINGS

Characteristic	Symbol	MJ11015	Unit
Collector-Emitter Voltage	$V_{CEO}$	-120	V
Collector-Base Voltage	$V_{CBO}$	-120	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current-Continuous	$I_C$	-30	A
Base Current-Continuous	$I_B$	-1	A
Collector Power Dissipation @ $T_C=25^\circ\text{C}$	$P_C$	200	Watts
Junction Temperature	$T_J$	200	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 to +200	$^\circ\text{C}$



**TO-3**



PIN 1.BASE.  
2.EMITTER  
COLLECTOR(CASE)

DIM	MILLIMETERS	
	MIN	MAX
A	39.00	
B	25.3	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
O	4.00	4.20
U	30.00	30.20
V	4.30	4.50

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{thj-c}$	0.87	$^\circ\text{C/W}$

**ELECTRICAL CHARACTERISTICS ( $T_C=25^{\circ}\text{C}$  unless otherwise noted)**

Characteristic	Symbol	Min.	Max	Unit
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**OFF CHARACTERISTICS**

Collector-Emitter Breakdown Voltage ( $I_C = 50\text{ mA}$ , $I_B = 0$ )	$V_{CEO(BR)}$	-120		V
Collector Cutoff Current ( $V_{CB} = -120\text{ V}$ , $I_E = 0$ ) ( $V_{CB} = -120\text{ V}$ , $I_E = 0$ ); $T_C=150^{\circ}\text{C}$	$I_{CBO}$		-1.0 -5.0	mA
Collector Cutoff Current ( $V_{CE} = -120\text{ V}$ , $I_B = 0$ )	$I_{CEO}$		-1.0	mA
Emitter Cutoff Current ( $V_{EB} = -5.0\text{ V}$ , $I_C = 0$ )	$I_{EBO}$		-5.0	mA

**ON CHARACTERISTICS**

DC Current Gain ( $I_C = -20\text{ A}$ , $V_{CE} = -5\text{ V}$ ) ( $I_C = -30\text{ A}$ , $V_{CE} = -5\text{ V}$ )	$h_{FE}$	1000 200		
Collector-Emitter Saturation Voltage ( $I_C = -20\text{ A}$ , $I_B = -0.2\text{ A}$ ) ( $I_C = -30\text{ A}$ , $I_B = -0.3\text{ A}$ )	$V_{CE(SAT)}$		-3.0 -4.0	V
Base-Emitter Saturation Voltage ( $I_C = -20\text{ A}$ , $I_B = -0.2\text{ A}$ ) ( $I_C = -30\text{ A}$ , $I_B = -0.3\text{ A}$ )	$V_{BE(SAT)}$		-3.5 -5.0	V

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