

isc Silicon PNP Darlington Power Transistor

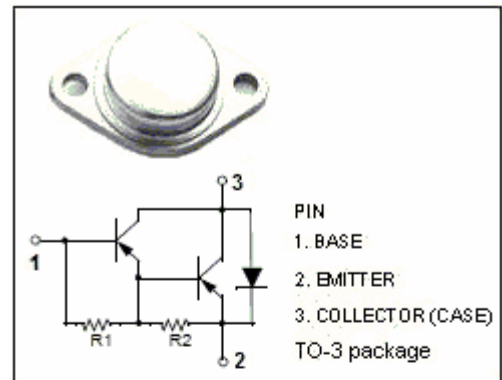
MJ11011

DESCRIPTION

- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -60V(\text{Min.})$
- 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 Type MJ11012

APPLICATIONS

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

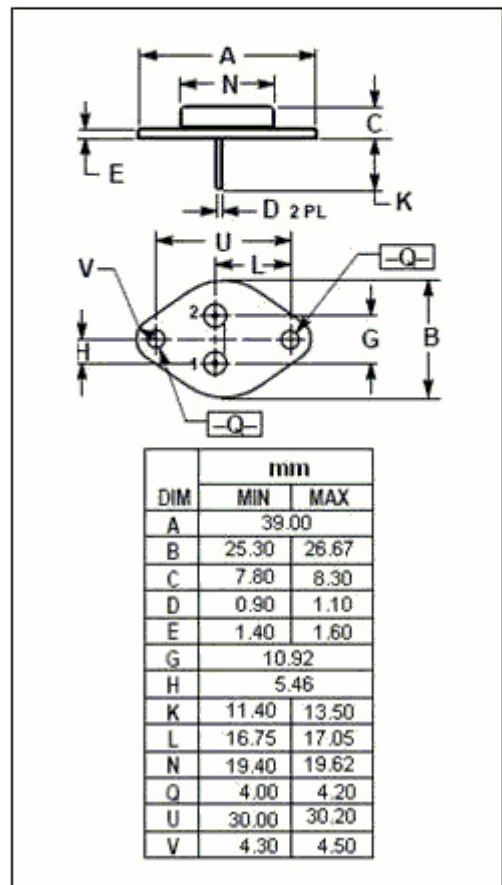


ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-60	V
$V_{CEO}$	Collector-Emitter Voltage	-60	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-30	A
$I_{CM}$	Collector Current-Peak	-50	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	-65~+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

MJ11011

## ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -0.1\text{A}; I_B = 0$	-60			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -20\text{A}; I_B = -0.2\text{A}$			-3.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -30\text{A}; I_B = -0.3\text{A}$			-4.0	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	$I_C = -20\text{A}; I_B = -0.2\text{A}$			-3.5	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	$I_C = -30\text{A}; I_B = -0.3\text{A}$			-5.0	V
$I_{CER}$	Collector Cutoff Current	$V_{CE} = -60\text{V}; R_{BE} = 1\text{k}\Omega$ $V_{CE} = -60\text{V}; R_{BE} = 1\text{k}\Omega; T_C = 150^{\circ}\text{C}$			-1.0 -5.0	mA
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = -50\text{V}; I_B = 0$			-1.0	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$			-5.0	mA
$h_{FE-1}$	DC Current Gain	$I_C = -20\text{A}, V_{CE} = -5\text{V}$	1000			
$h_{FE-2}$	DC Current Gain	$I_C = -30\text{A}, V_{CE} = -5\text{V}$	200			