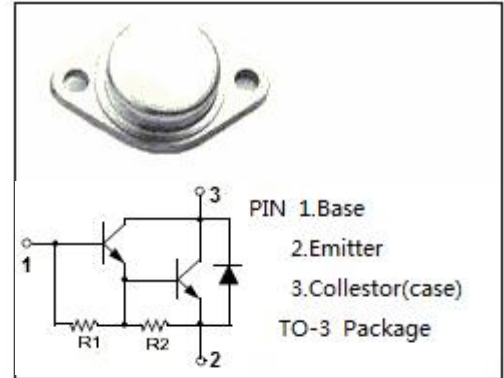


**isc Silicon NPN Darlington Power Transistor**
**2N6356**
**DESCRIPTION**

- High DC current gain  
:  $h_{FE} = 1500(\text{Min}) @ I_C = 4A$
- With TO-3 package
- Low collector saturation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation


**APPLICATIONS**

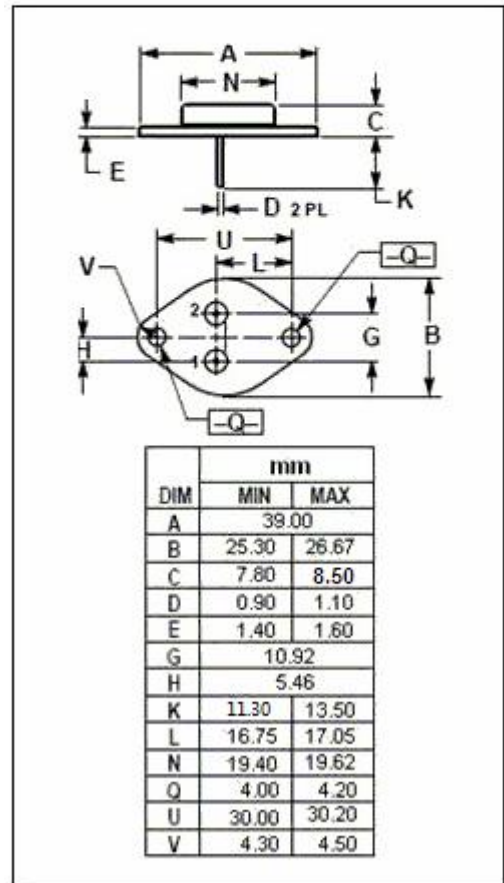
- Designed for general-purpose power amplifier and low-frequency switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	50	V
$V_{CEO}$	Collector-Emitter Voltage	40	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	20	A
$I_B$	Base Current-Continuous	0.5	A
$P_C$	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	150	W
$T_J$	Junction Temperature	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	1.09	$^\circ\text{C/W}$



## isc Silicon NPN Darlington Power Transistor

2N6356

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=50\text{mA}; I_B=0$	40			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=40\text{mA}$			2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=20\text{A}; I_B=1\text{A}$			4.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=20\text{A}; I_B=1\text{A}$			4.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=10\text{A}; V_{CE}=4\text{V}$			2.8	V
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			5	mA
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=40\text{V}; I_B=0$			1.0	mA
$I_{CBO}$	Collector Base Cutoff Current	$V_{CB}=50\text{V}; I_E=0$			0.5	mA
$h_{FE-1}$	DC Current Gain	$I_C=4\text{A}; V_{CE}=5\text{V}$	1500		20000	
$h_{FE-2}$	DC Current Gain	$I_C=20\text{A}; V_{CE}=5\text{V}$	100			

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