

**isc Silicon NPN Darlington Power Transistor**

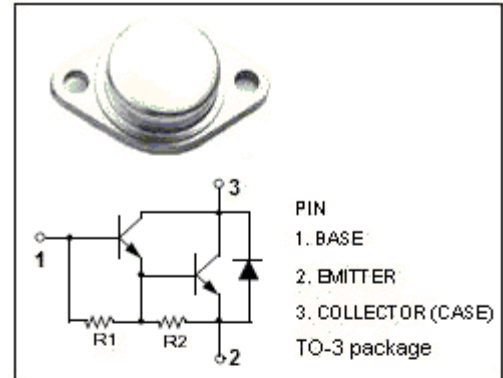
**MJ3041**

**DESCRIPTION**

- Built-in Base-Emitter Shunt Resistors
- High DC current gain-  
 $h_{FE} = 250$  (Min) @  $I_C = 2.5A$
- Collector-Emitter Sustaining Voltage-  
 $V_{CEO(SUS)} = 300V$  (Min)

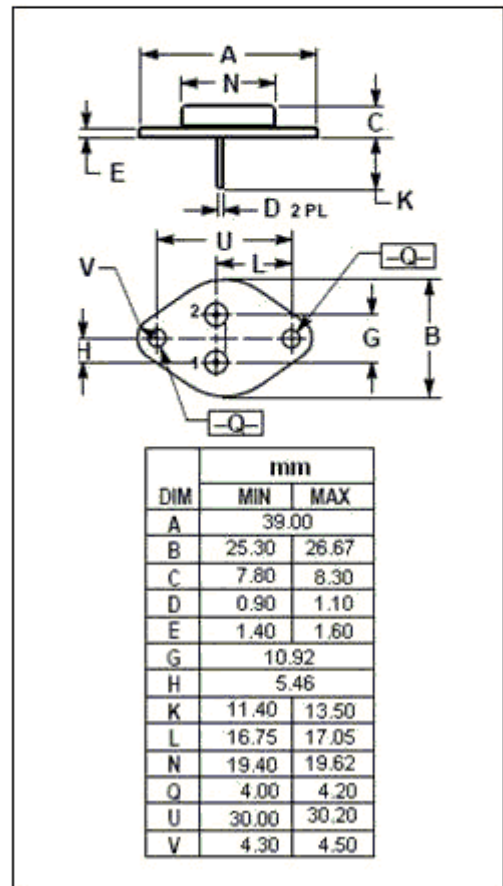
**APPLICATIONS**

- Developed for line operated amplifier, series pass and Switching regulator applications.



**ABSOLUTE MAXIMUM RATINGS( $T_C=25^\circ C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	400	V
$V_{CEO}$	Collector-Emitter Voltage	300	V
$V_{EBO}$	Emitter-Base Voltage	8	V
$I_C$	Collector Current -Continuous	10	A
$P_C$	Collector Power Dissipation@ $T_C=25^\circ C$	175	W
$T_J$	Junction Temperature	200	$^\circ C$
$T_{stg}$	Storage Temperature	-55~200	$^\circ C$



**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.0	$^\circ C/W$

**isc Silicon NPN Darlington Power Transistor****MJ3041****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}; I_B=0$	300		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=2.5\text{A}; I_B=50\text{mA}$		2.2	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=400\text{mA}$		2.5	V
$V_{BE(on)}$	Base-Emitter On voltage	$I_C=2.5\text{A}; V_{CE}=5\text{V}$		2.5	V
$I_{CBO}$	Collector Cutoff current	$V_{CE}=400\text{V}; I_E=0$ $V_{CE}=400\text{V}; I_E=0, T_C=100^\circ\text{C}$		1.0 5.0	mA
$I_{EBO}$	Emitter Cut-off current	$V_{EB}=5\text{V}; I_C=0$		40	mA
$h_{FE-1}$	DC Current Gain	$I_C=2.5\text{A}; V_{CE}=5\text{V}$	250		
$h_{FE-2}$	DC Current Gain	$I_C=5\text{A}; V_{CE}=5\text{V}$	50		