



**MJ4032**  
**MJ4035**

## COMPLEMENTARY SILICON POWER DARLINGTON TRANSISTORS

- STMicroelectronics PREFERRED SALESTYPES
- COMPLEMENTARY PNP - NPN DEVICES
- MONOLITHIC DARLINGTON CONFIGURATION
- INTEGRATED ANTIPARALLEL COLLECTOR-EMITTER DIODE

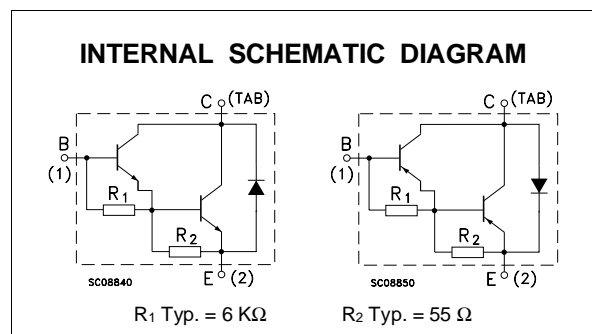
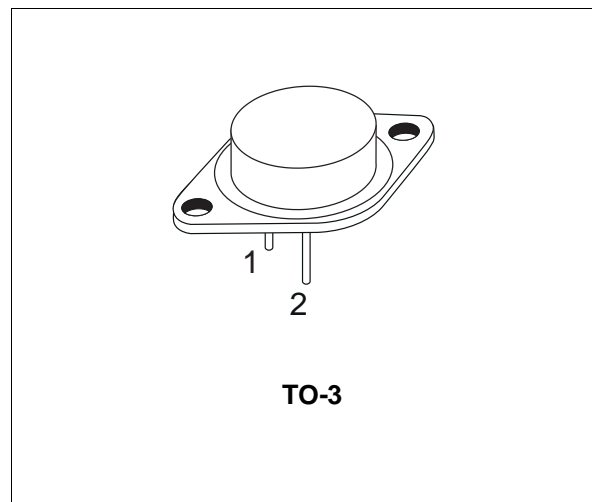
### APPLICATIONS

- GENERAL PURPOSE SWITCHING
- GENERAL PURPOSE AMPLIFIERS

### DESCRIPTION

The MJ4035 is a silicon Epitaxial-Base NPN power transistor in monolithic Darlington configuration mounted in Jedec TO-3 metal case. It is intended for use in general purpose and amplifier applications.

The complementary PNP type is the MJ4032.



### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		PNP	NPN	
$V_{CBO}$	Collector-Base Voltage ( $I_E = 0$ )	<b>MJ4032</b>		V
$V_{CEO}$	Collector-Emitter Voltage ( $I_B = 0$ )	<b>MJ4035</b>		
$V_{EBO}$	Emitter-Base Voltage ( $I_C = 0$ )			V
$I_C$	Collector Current			A
$I_B$	Base Current			A
$P_{tot}$	Total Dissipation at $T_c \leq 25^\circ\text{C}$			W
$T_{stg}$	Storage Temperature			$^\circ\text{C}$
$T_j$	Max. Operating Junction Temperature			$^\circ\text{C}$

For PNP types voltage and current values are negative.

## MJ4032 / MJ4035

### THERMAL DATA

R <sub>thj-case</sub>	Thermal Resistance Junction-case	Max	1.17	°C/W
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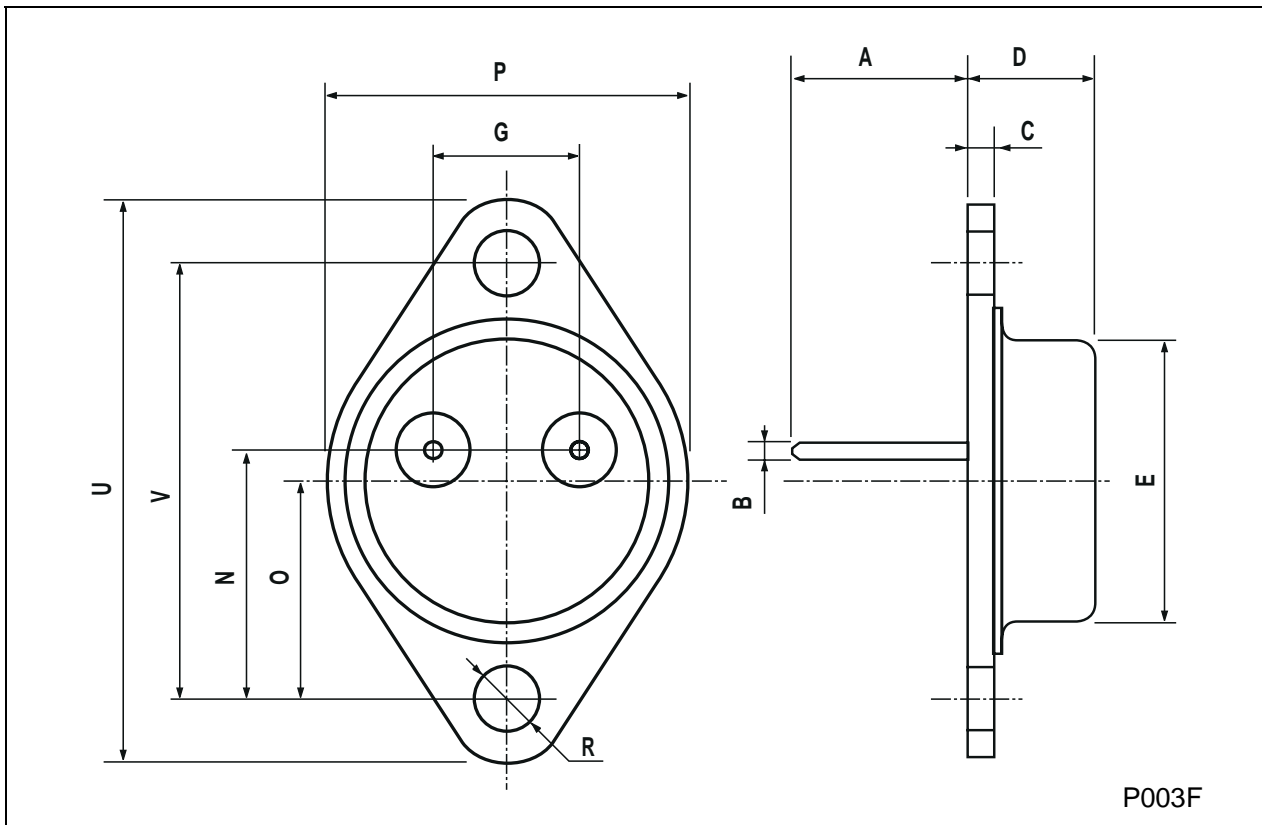
### ELECTRICAL CHARACTERISTICS (T<sub>case</sub> = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I <sub>CER</sub>	Collector Cut-off Current (R <sub>BE</sub> = 1KΩ)	V <sub>CE</sub> = 100 V V <sub>CE</sub> = 100 V T <sub>C</sub> = 150 °C			1 5	mA mA
I <sub>CEO</sub>	Collector Cut-off Current (I <sub>B</sub> = 0)	V <sub>CE</sub> = 50 V			3	mA
I <sub>EBO</sub>	Emitter Cut-off Current (I <sub>C</sub> = 0)	V <sub>EB</sub> = 5 V			5	mA
V <sub>(BR)CEO</sub> *	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 100 mA	100			V
V <sub>CE(sat)</sub> *	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 10 A I <sub>B</sub> = 40 mA I <sub>C</sub> = 16 A I <sub>B</sub> = 80 mA			2.5 4	V V
V <sub>BE</sub> *	Base-Emitter Voltage	I <sub>C</sub> = 10 A V <sub>CE</sub> = 3 V			3	V
h <sub>FE</sub> *	DC Current Gain	I <sub>C</sub> = 10 A V <sub>CE</sub> = 3 V	1000			

\* Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %  
For PNP type voltage and current values are negative.

**TO-3 MECHANICAL DATA**

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	11.00		13.10	0.433		0.516
B	0.97		1.15	0.038		0.045
C	1.50		1.65	0.059		0.065
D	8.32		8.92	0.327		0.351
E	19.00		20.00	0.748		0.787
G	10.70		11.10	0.421		0.437
N	16.50		17.20	0.649		0.677
P	25.00		26.00	0.984		1.023
R	4.00		4.09	0.157		0.161
U	38.50		39.30	1.515		1.547
V	30.00		30.30	1.187		1.193



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