New Jersey Semi-Conductor Products, Inc.

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# MJ4032 MJ4035

### COMPLEMENTARY SILICON POWER DARLINGTON TRANSISTORS

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

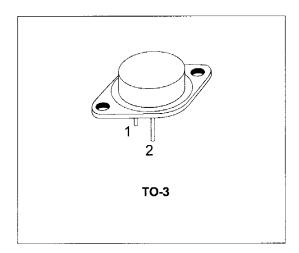
#### **APPLICATIONS**

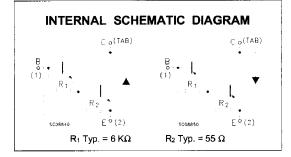
- GENERAL PURPOSE SWITCHING
- GENERAL PURPOSE AMPLIFIERS

#### DESCRIPTION

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

The complementary PNP type is the MJ4032.





#### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit	
		PNP	MJ4032		
		NPN	MJ4035		
Vсво	Collector-Base Voltage (I <sub>E</sub> = 0)		100	V	
VCEO	Collector-Emitter Voltage (I <sub>B</sub> = 0)		Voltage (I <sub>B</sub> = 0) 100		
VEBO	Emitter-Base Voltage (I <sub>C</sub> = 0)		5	V	
lc	Collector Current		16	A	
lв	Base Current		0.5	A	
Ptot	Total Dissipation at T <sub>c</sub> ≤ 25 °C		150	w	
Tstg	Storage Temperature		-65 to 200	°C	
Ti	Max. Operating Junction Temperature	200	°C		

For PNP types voltage and current values are negative.

NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

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#### MJ4032 / MJ4035

#### THERMAL DATA

R <sub>thj-case</sub>	Thermal	Resistance	Junction-case	Max	1.17	°C/W	
	L					0,11	ı.

## **ELECTRICAL CHARACTERISTICS** ( $T_{case}$ = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions		Min.	Тур.	Max.	Unit	
ICER	Collector Cut-off Current ( $R_{BE} = 1K\Omega$ )	V <sub>CE</sub> = 100 V V <sub>CE</sub> = 100 V	T <sub>c</sub> = 150 °C			1 5	mA mA	
ICEO	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 (Ic = 0)	V <sub>EB</sub> = 5 V	·			5	mA	
V(BR)CEO*	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>C</sub> = 16 A	l <sub>B</sub> = 40 mA l <sub>B</sub> = 80 mA			2.5 4	V V	
V <sub>BE</sub> *	Base-Emitter Voltage	lc = 10 A	V <sub>CE</sub> = 3 V			3		
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.