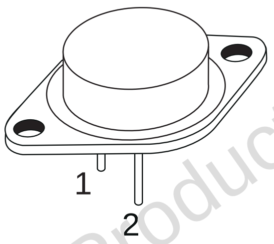
MJ4032
MJ4035

COMPLEMENTARY SILICON POWER DARLINGTON TRANSISTORS

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



TO-3

APPLICATIONS

- GENERAL PURPOSE SWITCHING
- GENERAL PURPOSE AMPLIFIERS

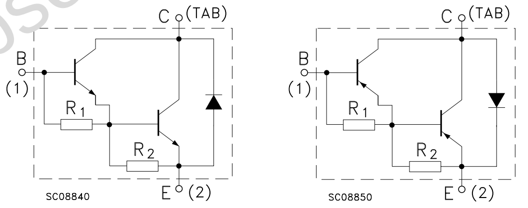
DESCRIPTION

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.

INTERNAL SCHEMATIC DIAGRAM



R$_1$ Typ. = 6 KΩ R$_2$ Typ. = 55 Ω

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter		Value	Unit
		PNP	MJ4032	
		NPN	MJ4035	
V_{CBO}	Collector-Base Voltage ($I_E = 0$)		100	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)		100	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)		5	V
I_C	Collector Current		16	A
I_B	Base Current		0.5	A
P_{tot}	Total Dissipation at $T_c \leq 25\ ^oC$		150	W
T_{stg}	Storage Temperature		-65 to 200	^oC
T_j	Max. Operating Junction Temperature		200	^oC

For PNP types voltage and current values are negative.

THERMAL DATA

$R_{thj\text{-}case}$	Thermal Resistance Junction-case	Max	1.17	^{o}C/W

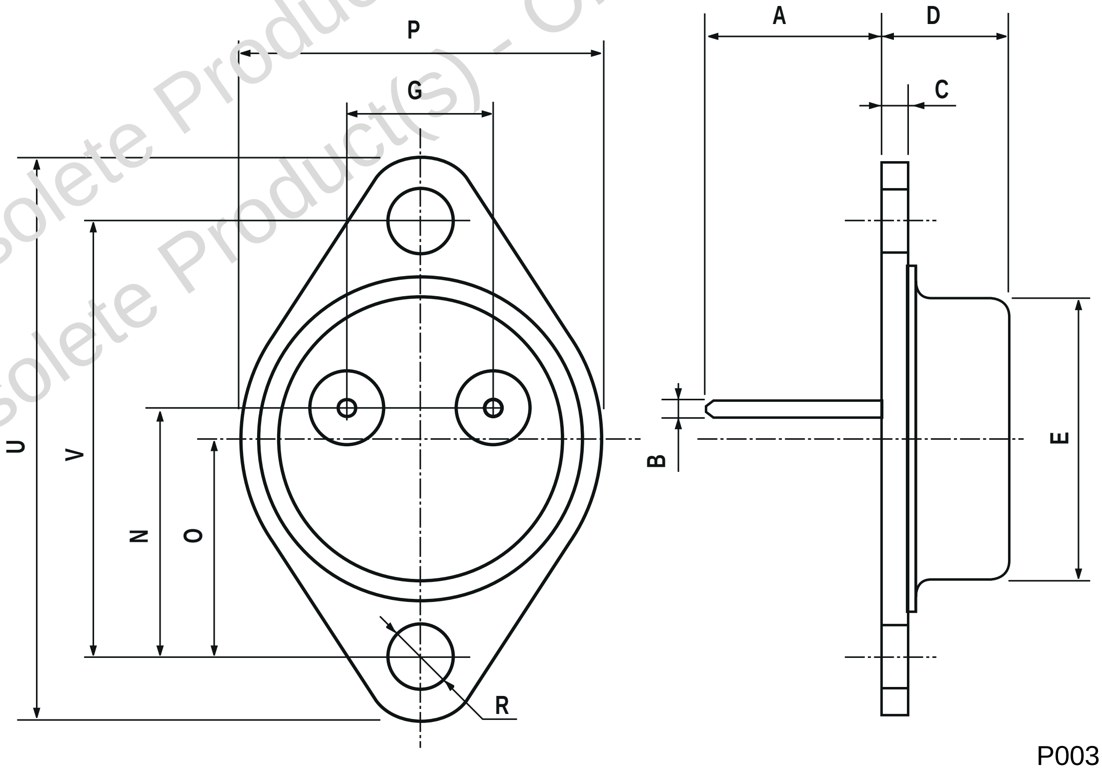
ELECTRICAL CHARACTERISTICS (T_{case} = 25 ^{o}C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CER}	Collector Cut-off Current (R_{BE} = 1KΩ)	V_{CE} = 100 V V_{CE} = 100 V T_c = 150 ^{o}C			1 5	mA mA
I_{CEO}	Collector Cut-off Current (I_B = 0)	V_{CE} = 50 V			3	mA
I_{EBO}	Emitter Cut-off Current (I_C = 0)	V_{EB} = 5 V			5	mA
$V_{(BR)CEO}$∗	Collector-Emitter Breakdown Voltage	I_C = 100 mA	100			V
$V_{CE(sat)}$∗	Collector-Emitter Saturation Voltage	I_C = 10 A I_B = 40 mA I_C = 16 A I_B = 80 mA			2.5 4	V V
V_{BE}∗	Base-Emitter Voltage	I_C = 10 A V_{CE} = 3 V			3	V
h_{FE}∗	DC Current Gain	I_C = 10 A V_{CE} = 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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