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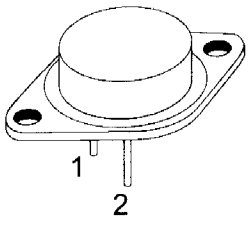
MJ4032
MJ4035

COMPLEMENTARY SILICON POWER DARLINGTON TRANSISTORS

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



TO-3

APPLICATIONS

- GENERAL PURPOSE SWITCHING
- GENERAL PURPOSE AMPLIFIERS

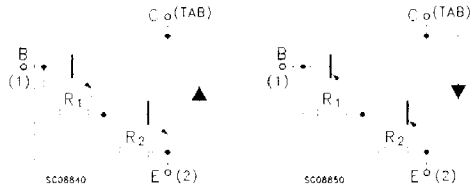
DESCRIPTION

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 $T_c \leq 25$ °C		150	W
T_{stg}	Storage Temperature		-65 to 200	°C
T_j	Max. Operating Junction Temperature		200	°C

For PNP types voltage and current values are negative.

THERMAL DATA

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

ELECTRICAL CHARACTERISTICS (T_{case} = 25 °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 °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.