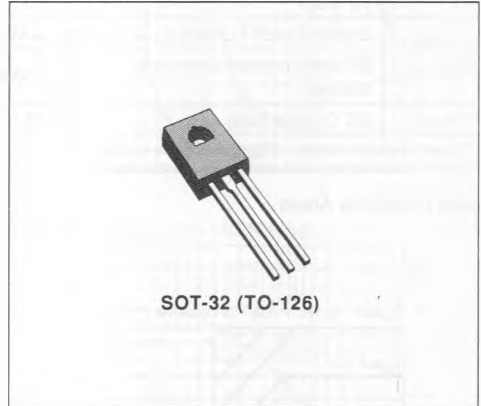# COMPLEMENTARY MEDIUM POWER TRANSISTORS

DESCRIPTION

The MJE370 (PNP type) and the MJE520 (NPN type) are silicon epitaxial-base transistors in Jedec TO-126 plastic package, designed for use in general purpose amplifier and switching circuits.

SOT-32 (TO-126)

INTERNAL SCHEMATIC DIAGRAMS

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-base Voltage (I_E = 0)	30	V
V_{CEO}	Collector-emitter Voltage (I_B = 0)	30	V
V_{EBO}	Emitter-base Voltage (I_C = 0)	4	V
I_C	Collector Current	3	A
I_{CM}	Collector Peak Current	7	A
I_B	Base Current	2	A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25$ °C	25	W
T_{stg}	Storage Temperature	– 65 to 150	°C
T_j	Junction Temperature	150	°C

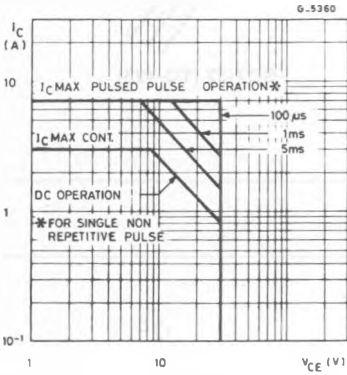For PNP types voltage and current values are negative.

THERMAL DATA

$R_{th\,j\text{-}case}$	Thermal Resistance Junction-case	Max	5	°C/W

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

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current (I_E = 0)	V_{CB} = 30V				100	μA
I_{EBO}	Emitter Cutoff Current (I_C = 0)	V_{EB} = 4V				100	μA
$V_{CEO(sus)}$*	Collector-emitter Sustaining Voltage	I_C = 100mA		30			V
h_{FE}*	DC Current Gain	I_C = 1A	V_{CE} = 1V	25			

* Pulsed : pulse duration = 300μs, duty cycle ≤ 1.5%.
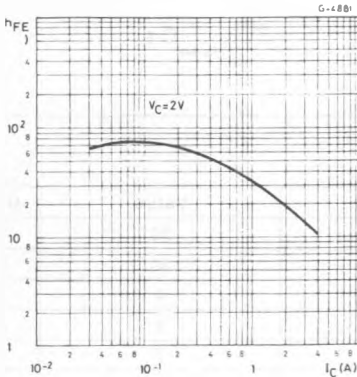For PNP types voltage and current values are negative.
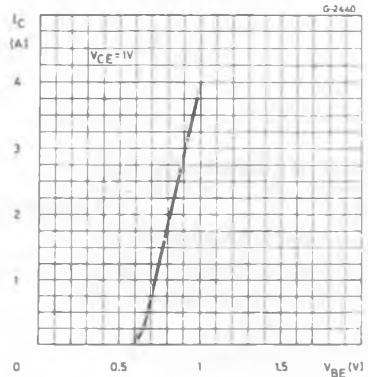
Safe Operating Areas.

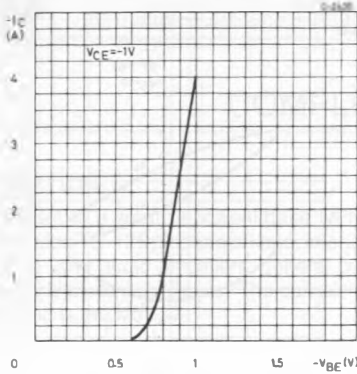
DC Current Gain (NPN type).

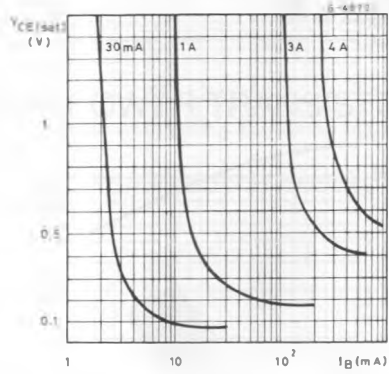

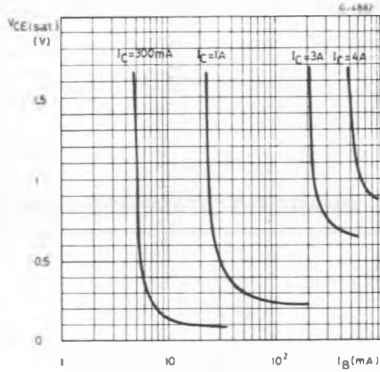DC Current Gain (PNP type).

DC Transconductance (NPN type).
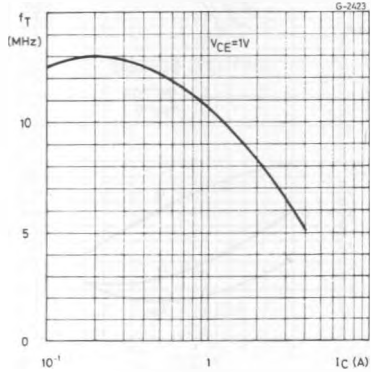
DC Transconductance(PNP type).
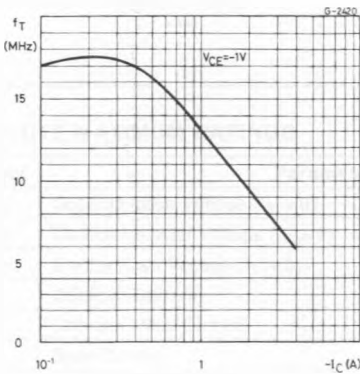
Collector-emitter Saturation Voltage (NPN type)

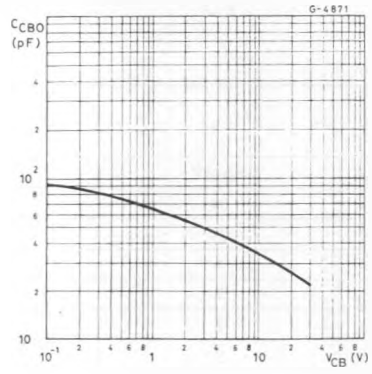Collector-emitter saturation voltage (PNP type).
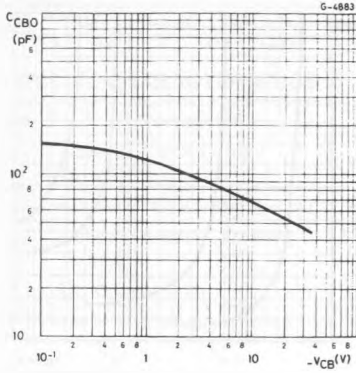
Transition Frequency (NPN type).

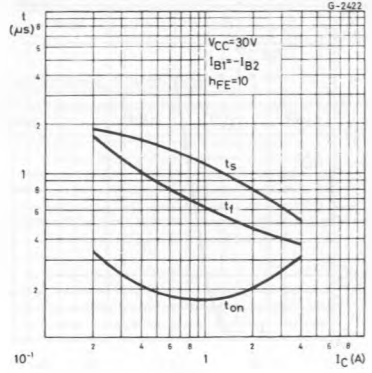Transition Frequency (PNP type).

Collector-base Capacitance (NPN type).

Collector-base Capacitance (PNP type).

Saturated Switching Characteristics (NPN type).

Saturated switching characteristics (PNP types).

SGS-THOMSON
MICROELECTRONICS