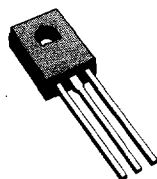


COMPLEMENTARY MEDIUM POWER TRANSISTORS

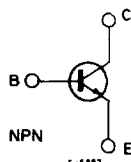
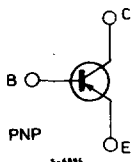
DESCRIPTION

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 $T_{case} \leq 25^\circ C$	25	W
T_{stg}	Storage Temperature	- 65 to 150	$^\circ C$
T_j	Junction Temperature	150	$^\circ C$

For PNP types voltage and current values are negative.

THERMAL DATA

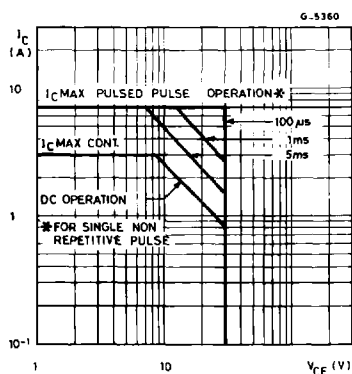
$R_{th \text{ J-case}}$	Thermal Resistance Junction-case	Max	5	$^{\circ}\text{C/W}$
-------------------------	----------------------------------	-----	---	----------------------

ELECTRICAL CHARACTERISTICS (T_{case} = 25 $^{\circ}\text{C}$ unless otherwise specified)

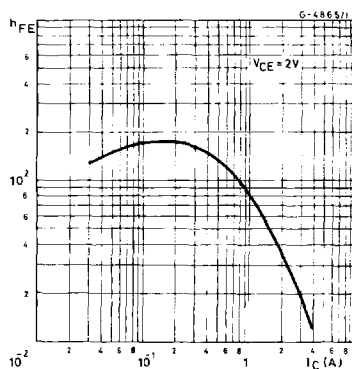
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	$V_{CB} = 30\text{V}$			100	μA
I_{EBO}	Emitter Cutoff Current ($I_C = 0$)	$V_{EB} = 4\text{V}$			100	μA
$V_{CE0(sus)*}$	Collector-emitter Sustaining Voltage	$I_C = 100\text{mA}$	30			V
h_{FE}^*	DC Current Gain	$I_C = 1\text{A}$ $V_{CE} = 1\text{V}$	25			

* Pulsed : pulse duration = 300 μs , duty cycle $\leq 1.5\%$.
For PNP types voltage and current values are negative.

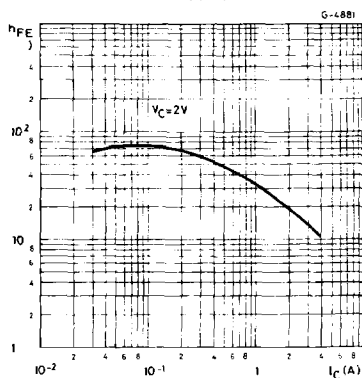
Safe Operating Areas.



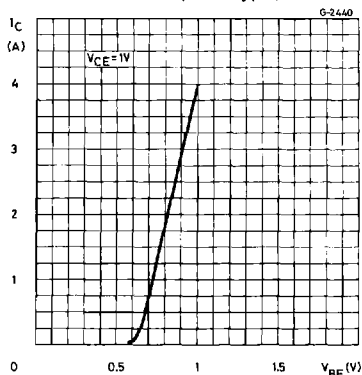
DC Current Gain (NPN type).



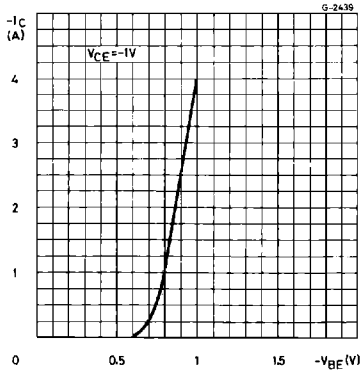
DC Current Gain (PNP type).



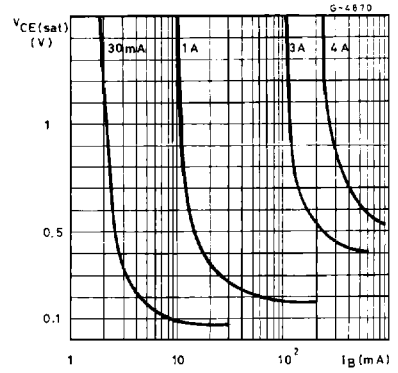
DC Transconductance (NPN type).



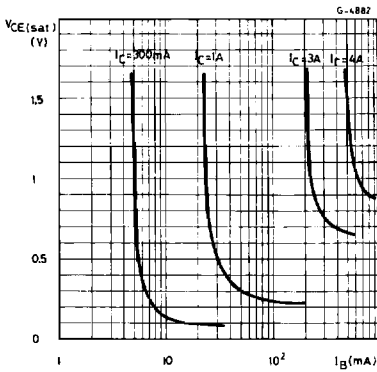
DC Transconductance(PNP type).



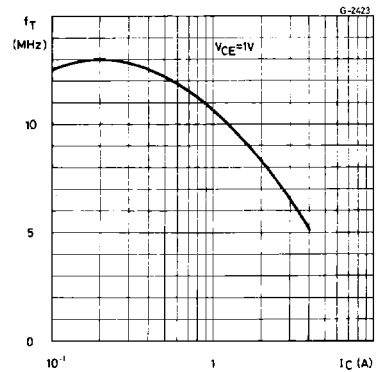
Collector-emitter Saturation Voltage (NPN type).



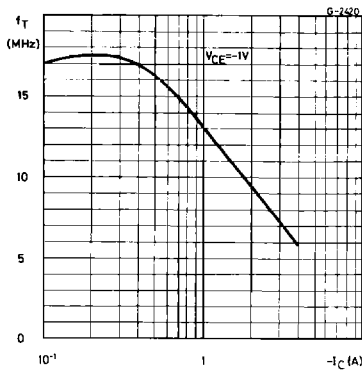
Collector-emitter saturation voltage (PNP type).



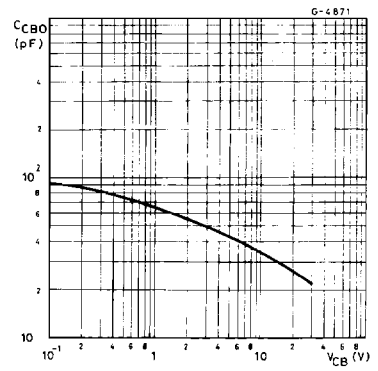
Transition Frequency (NPN type).



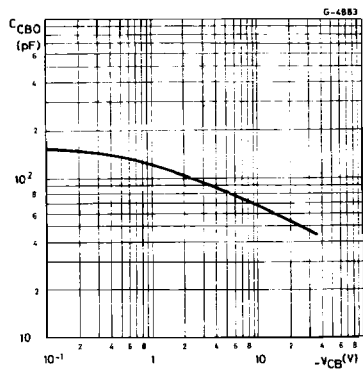
Transition Frequency (PNP type).



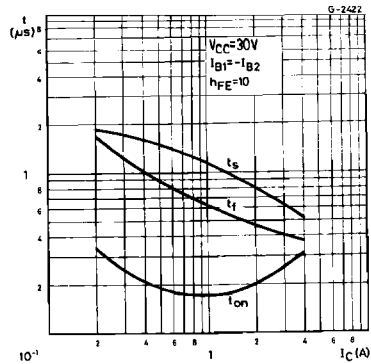
Collector-base Capacitance (NPN type).



Collector-base Capacitance (PNP type).



Saturated Switching Characteristics (NPN type).



Saturated switching characteristics (PNP types).

