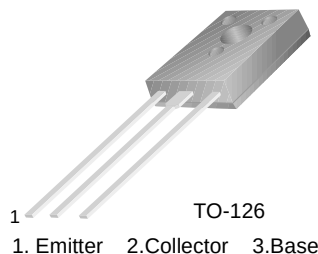


MJE700/701/702/703

Monolithic Construction With Built-in Base-Emitter Resistors

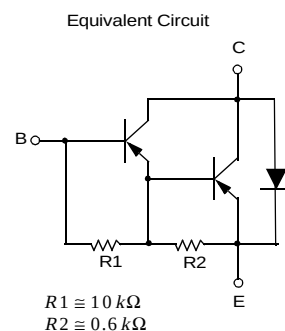
- High DC Current Gain : $h_{FE} = 750$ (Min.) @ $I_C = -1.5$ and -2.0 A DC
- Complement to MJE800/801/802/803



PNP Epitaxial Silicon Darlington Transistor

Absolute Maximum Ratings $T_C = 25^\circ\text{C}$ unless otherwise noted

Sym- bol	Parameter	Value	Unit s
V_{CBO}	Collector- Base Voltage : MJE700/701 : MJE702/703	- 60 - 80	V
V_{CEO}	Collector-Emitter Voltage : MJE700/701 : MJE702/703	- 60 - 80	V
V_{EBO}	Emitter- Base Voltage	- 5	V
I_C	Collector Current	- 4	A
I_B	Base Current	- 0.1	A
P_C	Collector Dissipation ($T_C = 25^\circ\text{C}$)	40	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ\text{C}$



Electrical Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage : MJE700/701 : MJE702/703	$I_C = -10\text{mA}$, $I_B = 0$	-60 -80		V V
I_{CEO}	Collector Cut-off Current : MJE700/701 : MJE702/703	$V_{CE} = -60\text{V}$, $I_B = 0$ $V_{CE} = -80\text{V}$, $I_B = 0$		-100 -100	μA μA
I_{CBO}	Collector Cut-off Current	$V_{CB} = \text{Rated } BV_{CEO}$, $I_E = 0$ $V_{CB} = \text{Rated } BV_{CEO}$, $I_E = 0$ $T_C = 100^\circ\text{C}$		-100 -500	μA μA
I_{EBO}	Emitter Cut-off Current	$V_{BE} = -5\text{V}$, $I_C = 0$		-2	mA
h_{FE}	DC Current Gain : MJE700/702 : MJE701/703 : ALL DEVICES	$V_{CE} = -3\text{V}$, $I_C = -1.5\text{A}$ $V_{CE} = -3\text{V}$, $I_C = -2\text{A}$ $V_{CE} = -3\text{V}$, $I_C = -4\text{A}$	750 750 100		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage : MJE700/702 : MJE701/703 : ALL DEVICES	$I_C = -1.5\text{A}$, $I_B = -30\text{mA}$ $I_C = -2\text{A}$, $I_B = -40\text{mA}$ $I_C = -4\text{A}$, $I_B = -40\text{mA}$		-2.5 -2.8 -3	V V V
$V_{BE(on)}$	Base-Emitter On Voltage : MJE700/702 : MJE701/703 : ALL DEVICES	$V_{CE} = -3\text{V}$, $I_C = -1.5\text{A}$ $V_{CE} = -3\text{V}$, $I_C = -2\text{A}$ $V_{CE} = -3\text{V}$, $I_C = -4\text{A}$		-1.2 -2.5 -3	V V V

Typical Characteristics

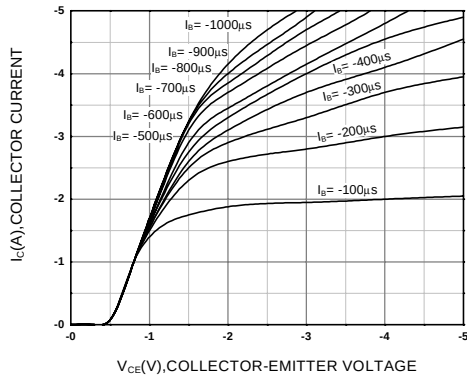


Figure 1. Static Characteristic

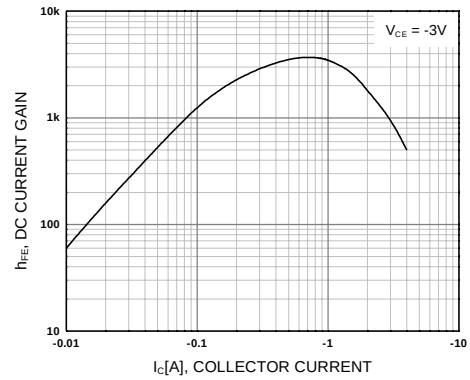


Figure 2. DC current Gain

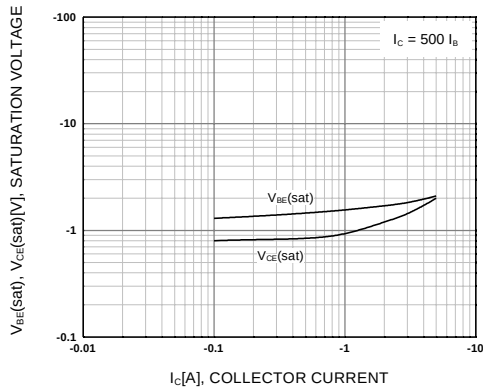


Figure 3. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage

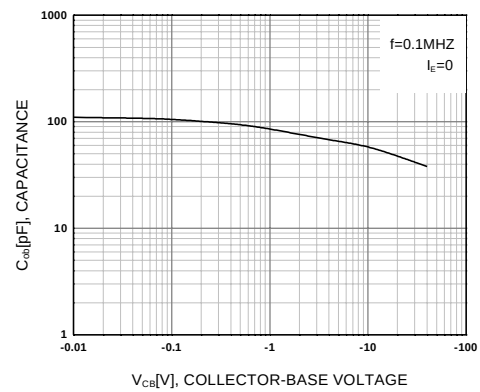


Figure 4. Collector Output Capacitance

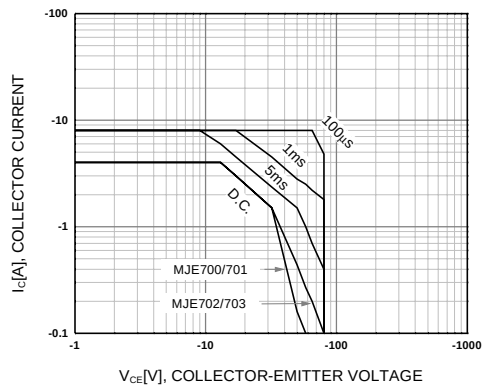


Figure 5. Safe Operating Area

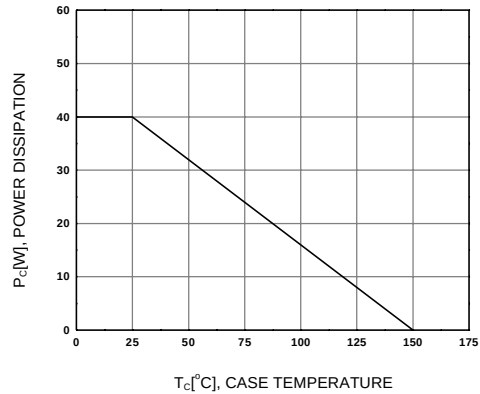


Figure 6. Power Derating

MJE700/701/702/703

Technical drawing of a mechanical part, showing three views: front, side, and top.

Front View Dimensions:

- Top flange width: 8.00 ± 0.30
- Top flange thickness: 3.90 ± 0.10
- Central hole diameter: $\varnothing 3.20 \pm 0.10$
- Overall height: 14.20 MAX
- Bottom flange width: 13.06 ± 0.30
- Bottom flange thickness: 0.75 ± 0.10
- Internal feature width: 1.60 ± 0.10
- Internal feature depth: 0.75 ± 0.10
- Material specification: 2.28 TYP [2.28 ± 0.20]

Side View Dimensions:

- Top flange width: 3.25 ± 0.20
- Overall height: 11.00 ± 0.20
- Internal feature width: (1.00)
- Internal feature depth: (0.50)
- Bottom flange width: 1.75 ± 0.20
- Overall height: 16.10 ± 0.20
- Material specification: $0.50^{+0.10}_{-0.05}$

Top View:

- Shows the top flange with three mounting holes.

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Rev. A1, February 2001

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E ² CMOS™	MICROWIRE™	LILENT SWITCHER®	
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