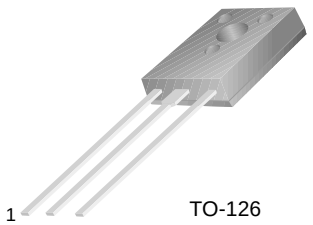
FAIRCHILD
SEMICONDUCTOR TM

MJE800/801/802/803

Monolithic Construction With Built-in Base-Emitter Resistors

- High DC Current Gain : h_{FE}= 750 (Min.) @ I_C= 1.5 and 2.0A DC
- Complement to MJE700/701/702/703



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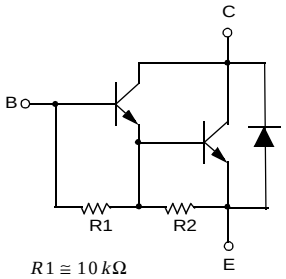
1. Emitter 2.Collector 3.Base

NPN Epitaxial Silicon Darlington Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter		Value	Units
V_{CBO}	Collector- Base Voltage	: MJE800/801	60	V
		: MJE802/803	80	V
V_{CEO}	Collector-Emitter Voltage	: MJE800/801	60	V
		: MJE802/803	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°C)		40	W
T_J	Junction Temperature		150	°C
T_{STG}	Storage Temperature		- 55 ~ 150	°C

Equivalent Circuit



$R1 \cong 10\,k\Omega$
$R2 \cong 0.6\,k\Omega$

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 50mA, I_B = 0			
	: MJE800/801		60		V
	: MJE802/803		80		V
I_{CEO}	Collector Cut-off Current				
	: MJE800/801	V_{CE} = 60V, I_B = 0		100	μA
	: MJE802/803	V_{CE} = 80V, I_B = 0		100	μA
I_{CBO}	Collector Cut-off Current	V_{CB} = Rated BV_{CEO}, I_E = 0		100	μA
		V_{CB} = Rated BV_{CEO}, I_E = 0 T_C = 100°C		500	μA
I_{EBO}	Emitter Cut-off Current	V_{BE} = 5V, I_C = 0		2	mA
h_{FE}	DC Current Gain : MJE800/802	V_{CE} = 3V, I_C = 1.5A	750		
	: MJE801/803	V_{CE} = 3V, I_C = 2A	750		
	: ALL DEVICES	V_{CE} = 3V, I_C = 4A	100		
V_{CE}(sat)	Collector-Emitter Saturation Voltage				
	: MJE800/802	I_C = 1.5A, I_B = 30mA		2.5	V
	: MJE801/803	I_C = 2A, I_B = 40mA		2.8	V
	: ALL DEVICES	I_C = 4A, I_B = 40mA		3	V
V_{BE}(on)	Base-Emitter ON Voltage				
	: MJE800/802	V_{CE} = 3V, I_C = 1.5A		2.5	V
	: MJE801/803	V_{CE} = 3V, I_C = 2A		2.5	V
	: ALL DEVICES	V_{CE} = 3V, I_C = 4A		3	V

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Typical Characteristics

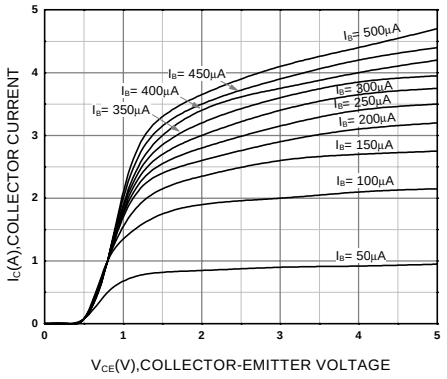


Figure 1. Static Characteristic

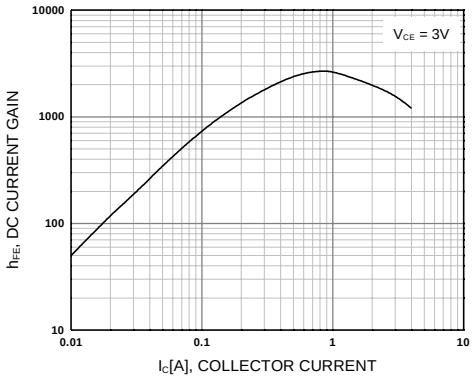


Figure 2. DC current Gain

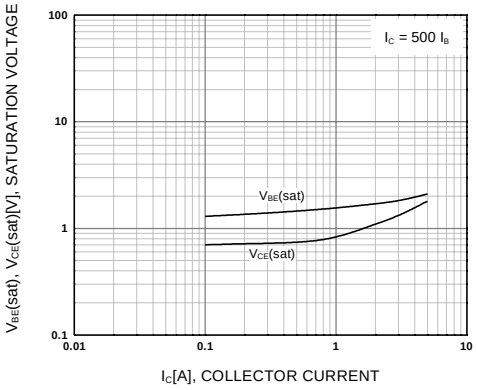


Figure 3. Collector-Emitter Saturation Voltage Base-Emitter Saturation Voltage

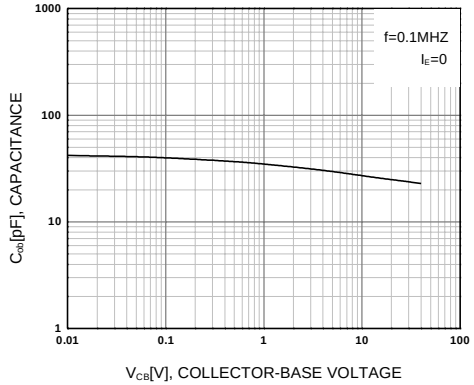


Figure 4. Collector Output Capacitance

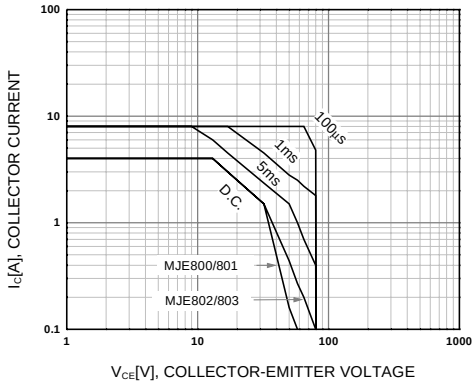


Figure 5. Safe Operating Area

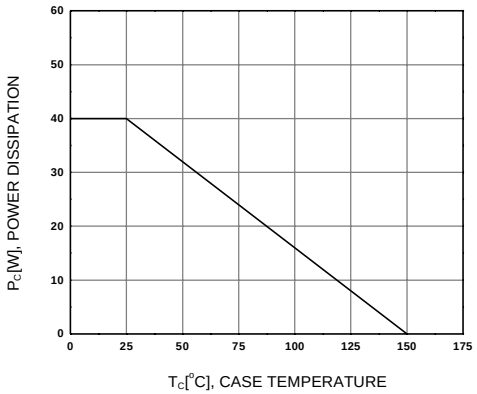
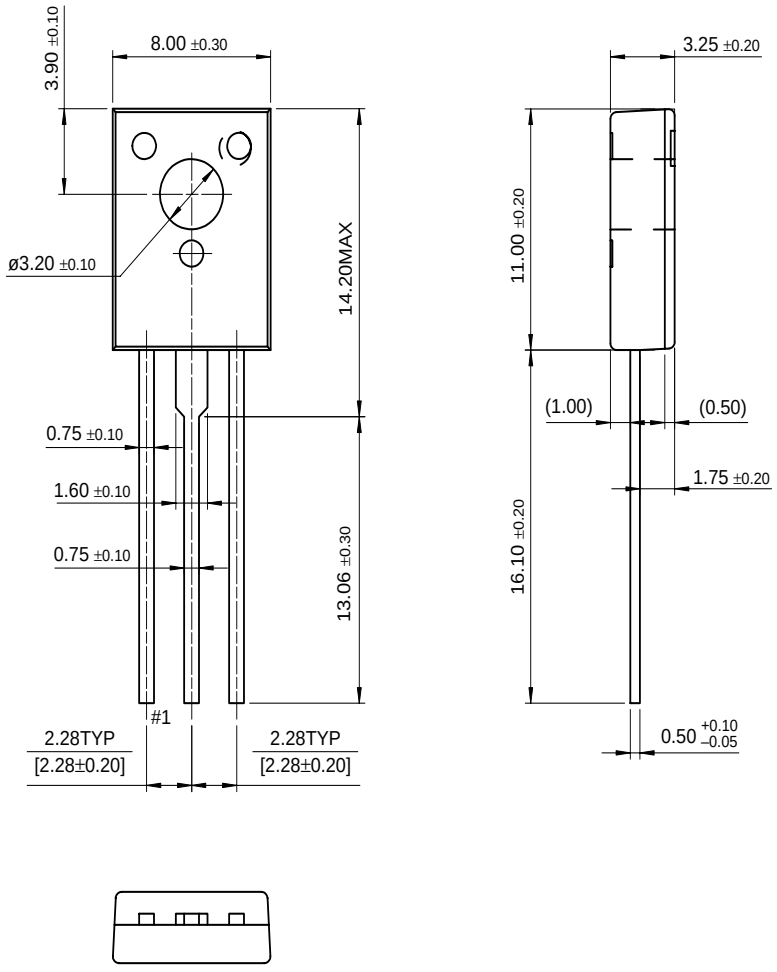


Figure 6. Power Derating

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Package Demensions

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Dimensions in Millimeters

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