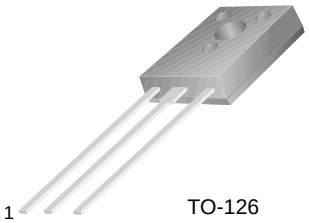
FAIRCHILD SEMICONDUCTOR®

KSE700/701/702/703

Monolithic Construction With Built-in Base-Emitter Resistors

- High DC Current Gain : h_{FE}= 750 (Min.) @ I_C= -1.5 and -2.0A DC
- Complement to KSE800/801/802/803



TO-126

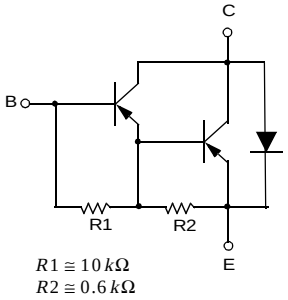
1. Emitter 2.Collector 3.Base

PNP Epitaxial Silicon Darlington Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector- Base Voltage : KSE700/701	- 60	V
	: KSE702/703	- 80	V
V_{CEO}	Collector-Emitter Voltage : KSE700/701	- 60	V
	: KSE702/703	- 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



Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage				
	: KSE700/701	I_C = - 10mA, I_B = 0	-60		V
	: KSE702/703		-80		V
I_{CEO}	Collector Cut-off Current				
	: KSE700/701	V_{CE} = - 60V, I_B = 0		-100	µA
	: KSE702/703	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				
	: KSE700/702	V_{CE} = - 3V, I_C = - 1.5A	750		
	: KSE701/703	V_{CE} = - 3V, I_C = - 2A	750		
	: ALL DEVICES	V_{CE} = - 3V, I_C = - 4A	100		
V_{CE}(sat)	Collector-Emitter Saturation Voltage				
	: KSE700/702	I_C = - 1.5A, I_B = - 30mA		-2.5	V
	: KSE701/703	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				
	: KSE700/702	V_{CE} = - 3V, I_C = - 1.5A		-1.2	V
	: KSE701/703	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

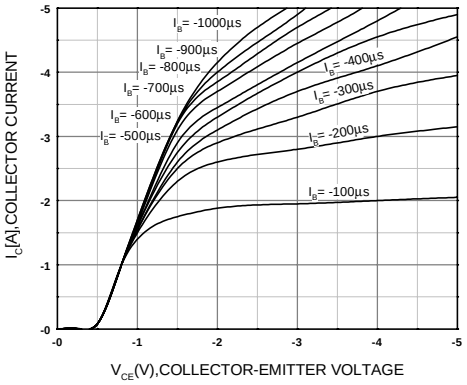

Figure 1. Static Characteristic

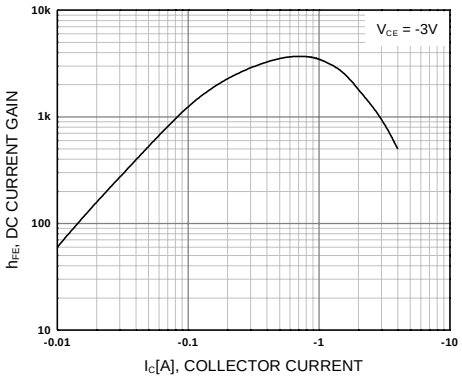

Figure 2. DC current Gain

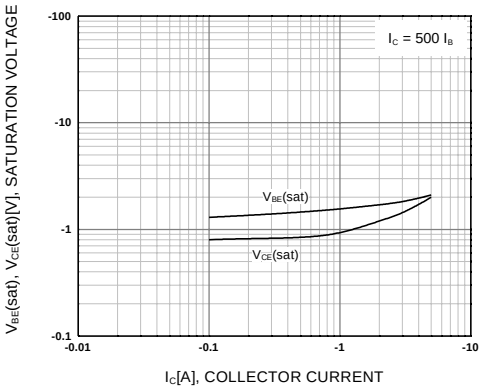

Figure 3. Collector-Emitter Saturation Voltage Base-Emitter Saturation Voltage

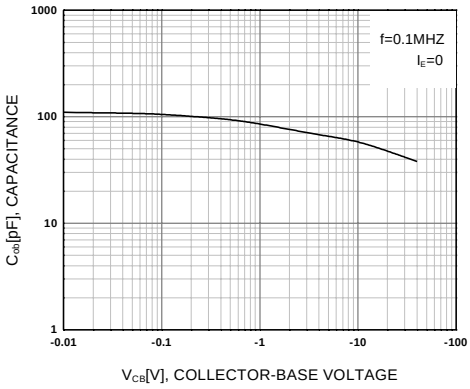

Figure 4. Collector Output Capacitance

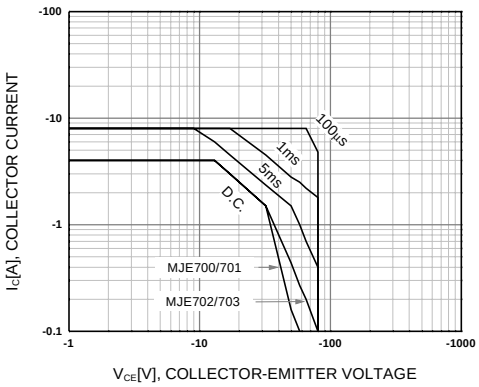

Figure 5. Safe Operating Area

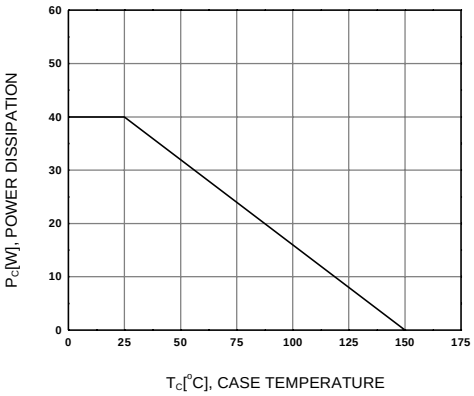

Figure 6. Power Derating

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Package Demensions

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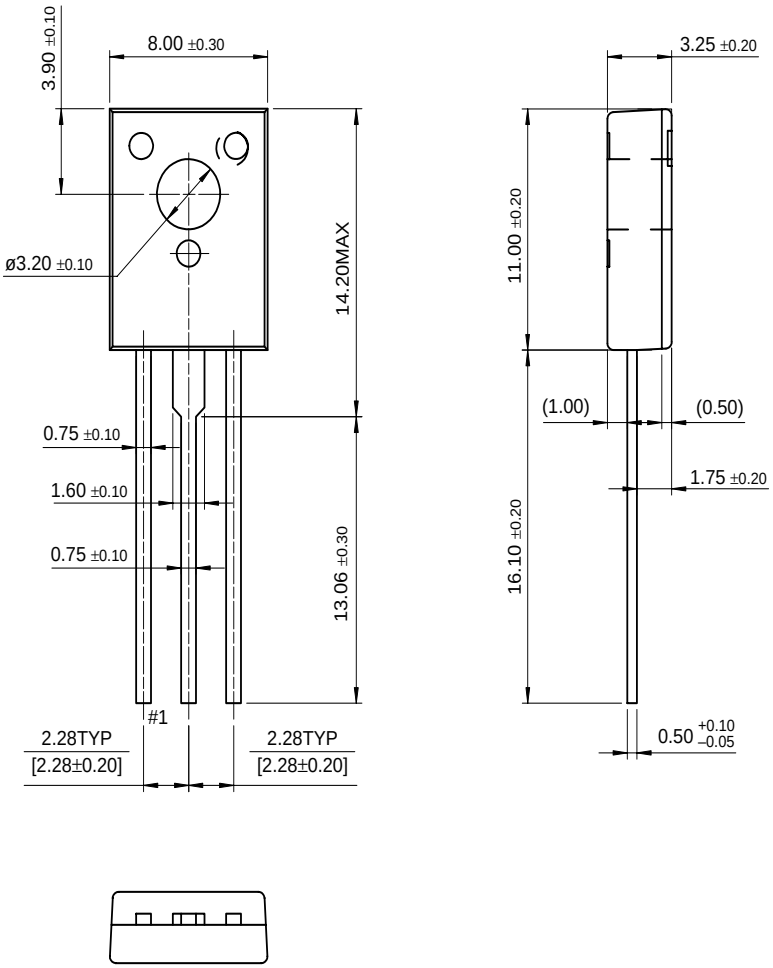

Dimensions in Millimeters

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