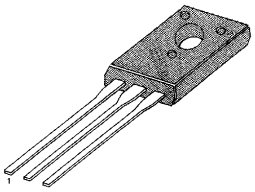
NPN EPITAXIAL
KSE800/801/803 SILICON DARLINGTON TRANSISTOR

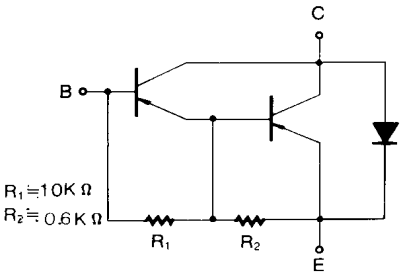
HIGH DC CURRENT GAIN
MIN h_{FE}= 750 @I_C= 1.5 and 2.0A DC
MONOLITHIC CONSTRUCTION WITH
BUILT-IN BASE-EMITTER RESISTORS

• Complement to KSE700/701/702/703

TO-126



1. Emitter 2. Collector 3. Base



ABSOLUTE MAXIMUM RATINGS

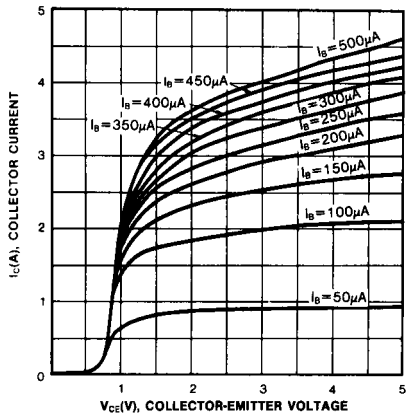
Characteristic	Symbol	Rating	Unit
Collector- Base Voltage	V_{CBO}		
: KSE800/801		60	V
: KSE802/803		80	V
Collector-Emitter Voltage	V_{CEO}		
: KSE800/801		60	V
: KSE802/803		80	V
Emitter- Base Voltage	V_{EBO}	5	V
Collector Current	I_C	4	A
Base Current	I_B	0.1	A
Collector Dissipation (T_C=25°C)	P_C	40	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 ~ 150	°C

ELECTRICAL CHARACTERISTICS (T_C=25°C)

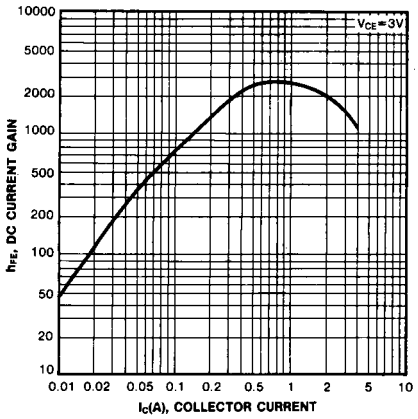
Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector Emitter Breakdown Voltage	BV_{CEO}	I_C = 50mA, I_B = 0			
: KSE800/801			60		V
: KSE802/803			80		V
Collector Cutoff Current	I_{CEO}				
: KSE800/801		V_{CE} = 60V, I_B = 0		100	μA
: KSE802/803		V_{CE} = 80V, I_B = 0		100	μA
Collector Cutoff Current	I_{CBO}	V_{CB} = Rated BV_{CEO}, I_E = 0		100	μA
		V_{CB} = Rated BV_{CEO}, I_E = 0 T_C = 100°C		500	μA
Emitter Cutoff Current	I_{EBO}	V_{BE} = 5V, I_C = 0		2	mA
DC Current Gain : KSE800/802	h_{FE}	V_{CE} = 3V, I_C = 1.5A	750		
: KSE801/803		V_{CE} = 3V, I_C = 2A	750		
: ALL DEVICES		V_{CE} = 3V, I_C = 4A	100		
Collector-Emitter Saturation Voltage	V_{CE}(sat)				
: KSE800/802		I_C = 1.5A, I_B = 30mA		2.5	V
: KSE801/803		I_C = 2A, I_B = 40mA		2.8	V
: ALL DEVICES		I_C = 4A, I_B = 40mA		3	V
Base-Emitter On Voltage	V_{BE}(on)				
: KSE800/802		V_{CE} = 3V, I_C = 1.5A		1.2	V
: KSE801/803		V_{CE} = 3V, I_C = 2A		2.5	V
: ALL DEVICES		V_{CE} = 3V, I_C = 4A		3	V

FAIRCHILD SEMICONDUCTOR TM

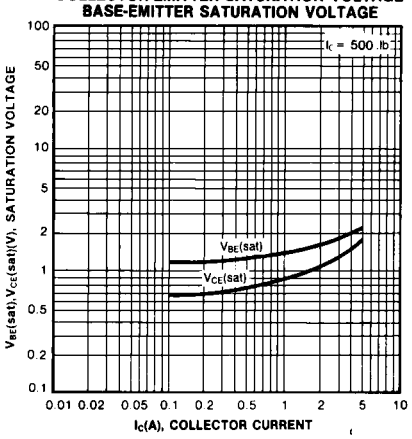
STATIC CHARACTERISTIC



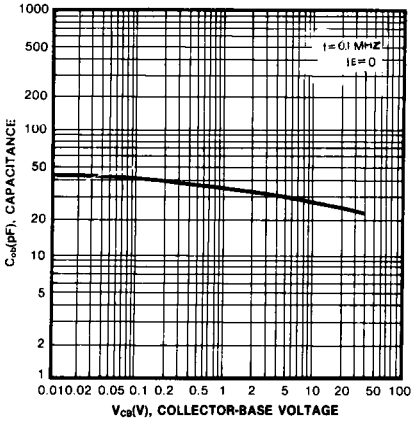
DC CURRENT GAIN



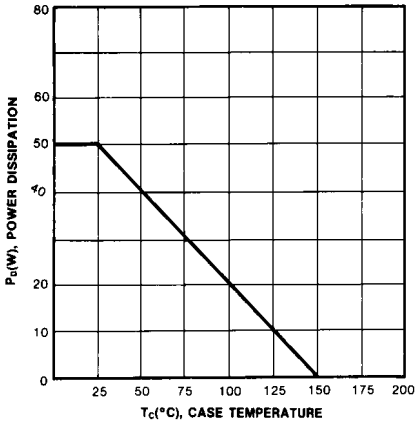
COLLECTOR-EMITTER SATURATION VOLTAGE
BASE-EMITTER SATURATION VOLTAGE



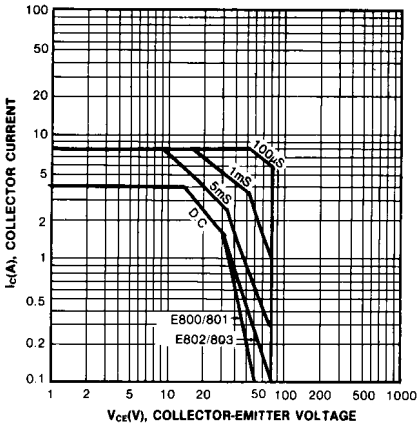
COLLECTOR OUTPUT CAPACITANCE



POWER DERATING



SAFE OPERATING AREA



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