

NPN Epitaxial Silicon Darlington Transistor

KSE800

Features

- 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 KSE700
- This is a Pb-Free Device

ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise noted)

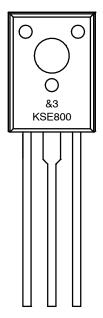
Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	60	V
V _{EBO}	Emitter-Base Voltage	5	V
Ic	Collector Current	4	Α
Ι _Β	Base Current	0.1	Α
P _C	Collector Dissipation (T _C = 25°C)		W
T_J	T _J Junction Temperature		°C
T _{STG}	Storage Temperature	−55 ~ 150	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



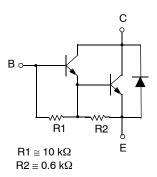
TO-126-3LD CASE 340AS

MARKING DIAGRAM



&3 = 3-Digit Date Code KSE800 = Specific Device Code

EQUIVALENT CIRCUIT



ORDERING INFORMATION

Device	Package	Shipping
KSE800STU	TO-126-3LD (Pb-Free)	1920 Units / Tube

KSE800

ELECTRICAL CHARACTERISTICS ($T_C = 25$ °C unless otherwise noted)

Symbol	Parameter	Test Condition	Min	Max	Units
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C = 50 mA, I _B = 0	60		V
I _{CEO}	Collector Cut-off Current	V _{CE} = 60 V, I _B = 0		100	μΑ
I _{CBO}	Collector Cut-off Current	V_{CB} = Rated BV _{CEO} , I_E = 0 V_{CB} = Rated BV _{CEO} , I_E = 0, T_C = 100°C		100 500	μΑ
I _{EBO}	Emitter Cut-off Current	V _{BE} = 5 V, I _C = 0		2	mA
h _{FE}	DC Current Gain	V _{CE} = 3 V, I _C = 1.5 A V _{CE} = 3 V, I _C = 4 A	750 100		
V _{CE} (sat)	Collector-Emitter Saturation Voltage	I _C = 1.5 A, I _B = 30 mA I _C = 4 A, I _B = 40 mA		2.5 3	V
V _{BE} (on)	Base-Emitter On Voltage	V _{CE} = 3 V, I _C = 1.5 A V _{CE} = 3 V, I _C = 4 A		2.5 3	V

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

KSE800

TYPICAL CHARACTERISTICS

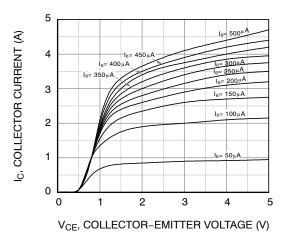


Figure 1. Static Characteristic

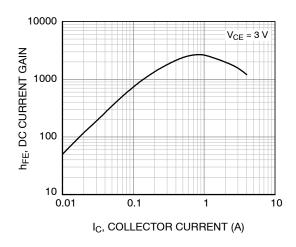


Figure 2. DC Current Gain

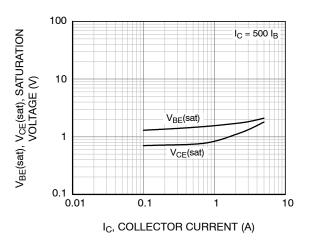


Figure 3. Collector–Emitter Saturation Voltage Base–Emitter Saturation Voltage

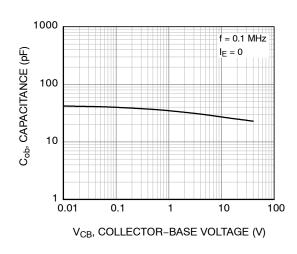


Figure 4. Collector Output Capacitance

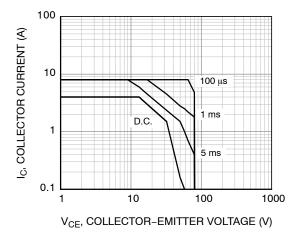


Figure 5. Safe Operating Area

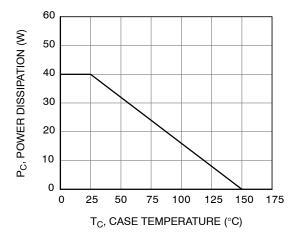
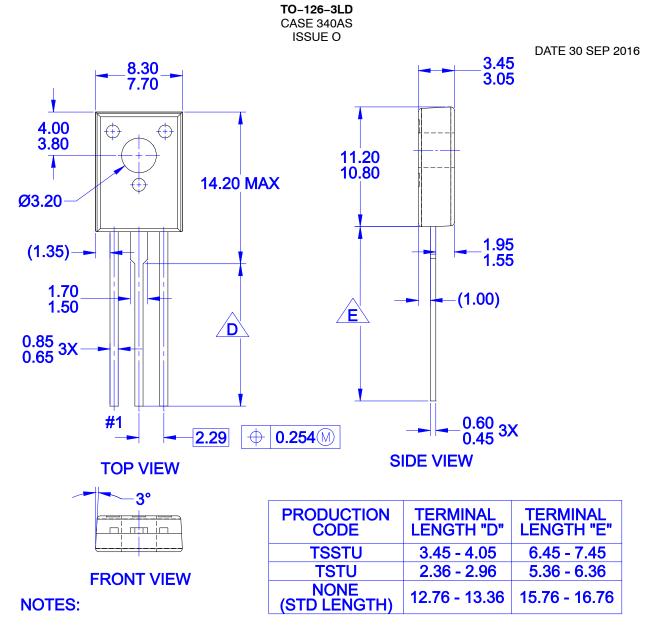


Figure 6. Power Derating



- A. NO INDUSTRY STANDARD APPLIES TO THIS PACKAGE
- B. ALL DIMENSIONS ARE IN MILLIMETERS
- C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR PROTRUSIONS

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E	OR TERMINAL	LENGTH "E",	REFER TO	TABLE

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