

PNP Silicon Transistor

KSA1156

Features

- High Breakdown Voltage
- Low Collector Saturation Voltage
- High Speed Switching
- This is a Pb-Free Device

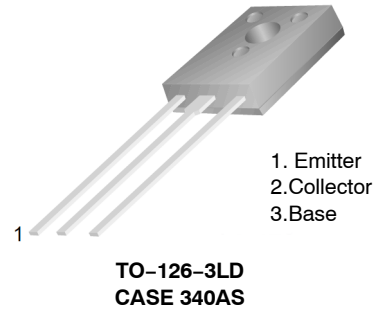
Applications

- High Voltage Switching
- Low Power Switching Regulator
- DC-DC Converter

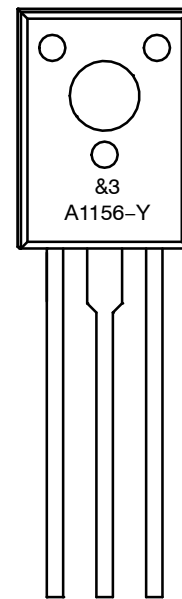
ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise noted)

Symbol	Parameter	Ratings	Units
V _{CB0}	Collector-Base Voltage	-400	V
V _{CEO}	Collector-Emitter Voltage	-400	V
V _{EB0}	Emitter-Base Voltage	-7	V
I _B	Base Current	-0.25	A
I _C	Collector Current (DC)	-0.5	A
I _{CP}	Collector Current (Pulse)	-1	A
P _C	Collector Dissipation, T _A = 25°C T _C = 25°C	1 10	W
T _J	Junction Temperature	150	°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.



MARKING DIAGRAM



&3 = 3-Digit Date Code
 A1156-Y = Specific Device Code

ORDERING INFORMATION

Device	Package	Shipping
KSA1156YS	TO-126-3LD (Pb-Free)	2000 Units / Bulk Bag

KSA1156

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

Symbol	Characteristic	Test Condition	Min	Max	Unit
V _{CEO(sus)}	Collector-Emitter Sustaining Voltage	I _C = -100 mA, I _B = -10 mA, L = -20 mH	-400	-	V
V _{CEX(sus)}	Collector-Emitter Sustaining Voltage	I _C = -200 mA, I _{B1} = I _{B2} = -20 mA, V _{BE(off)} = 5 V, L = 10 mH	-400	-	V
I _{CBO}	Collector Cut-off Current	V _{CB} = -400 V, I _E = 0	-	-100	μA
I _{EBO}	Emitter Cut-off Current	V _{EB} = -5 V, I _C = 0	-	-10	μA
I _{CEx1}	Collector Cut-off Current	V _{CE} = -400 V, V _{BE(off)} = 1.5 V	-	-100	μA
I _{CEx2}	Collector Cut-off Current	V _{CE} = -400 V, V _{BE(off)} = 1.5 V, T _C = 125°C	-	-1	mA
h _{FE}	DC Current Gain	V _{CE} = -5 V, I _C = -100 mA	30	200	
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -100 mA, I _B = -10 mA	-	-1	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = -100 mA, I _B = -10 mA	-	-1.2	V
t _{ON}	Turn On Time	V _{CC} = -150 V, I _C = -100 mA, I _{B1} = -10 mA, I _{B2} = 20 mA, R _L = 1.5 kΩ	-	1	μs
t _{STG}	Storage Time		-	4	μs
t _F	Fall Time		-	1	μs

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.

h_{FE} CLASSIFICATION

Classification	N	R	O	Y
h _{FE}	30 ~ 60	40 ~ 80	60 ~ 120	100 ~ 200

TYPICAL CHARACTERISTICS

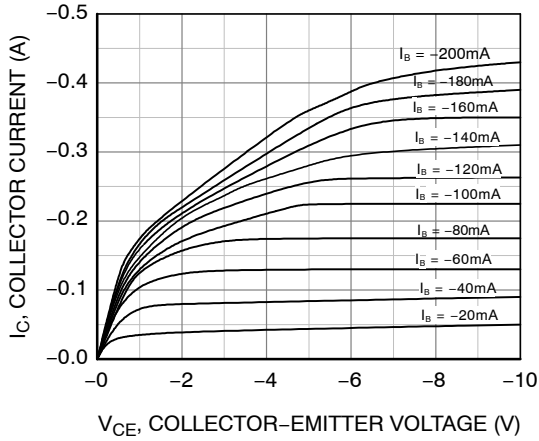


Figure 1. Static Characteristic

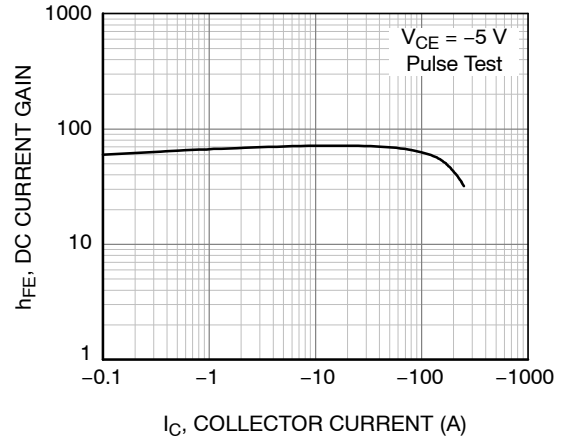


Figure 2. DC Current Gain

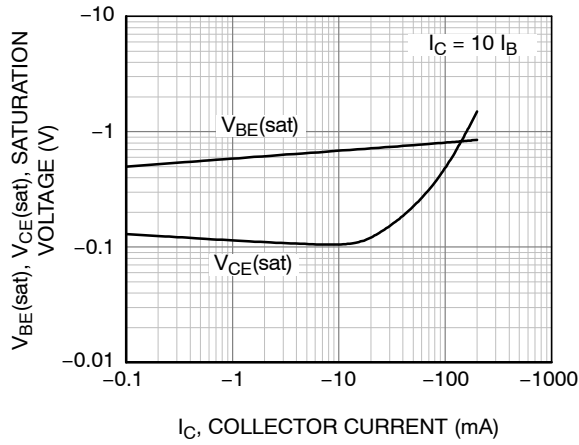


Figure 3. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage

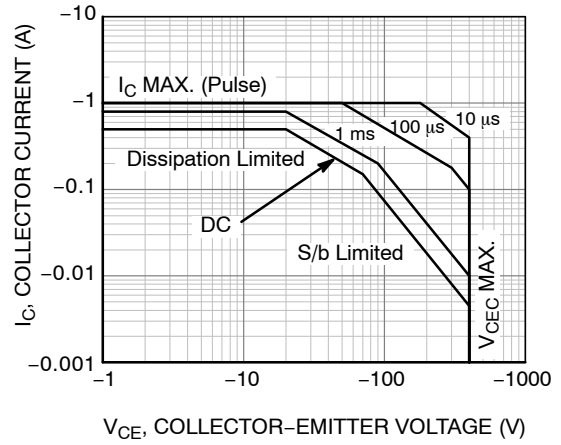


Figure 4. Safe Operating Area

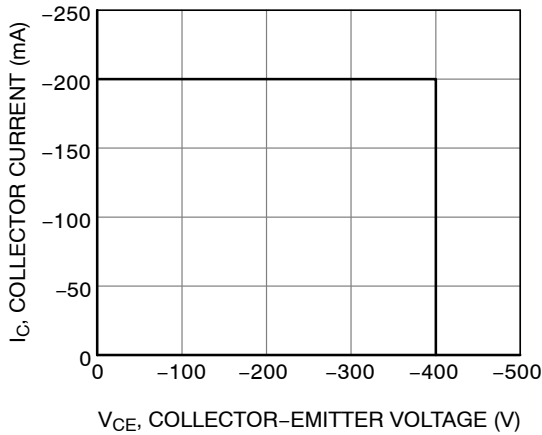


Figure 5. Reverse Bias Safe Operating Area

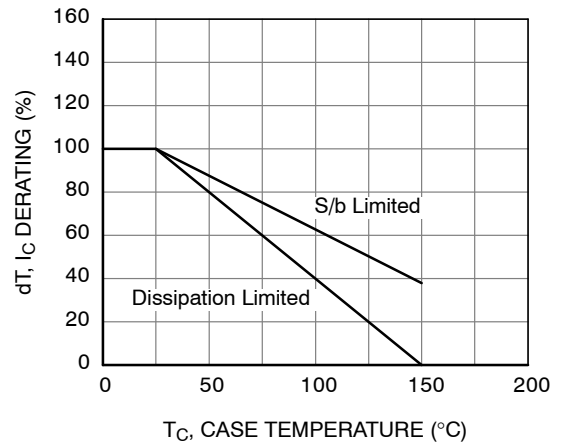


Figure 6. Derating Curve of Safe Operating Areas

KSA1156

TYPICAL CHARACTERISTICS (Continued)

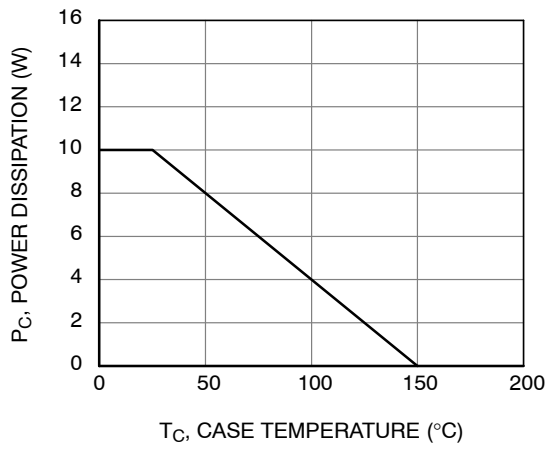


Figure 7. Power Derating

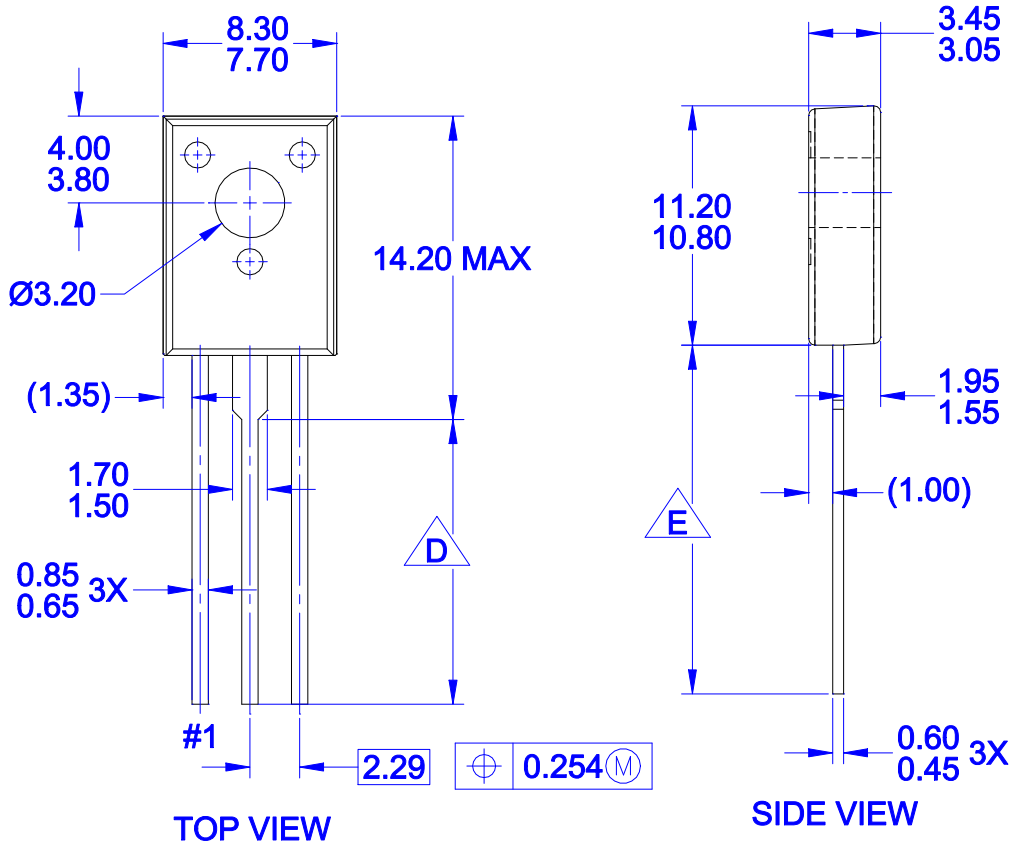
MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

ON Semiconductor®



TO-126-3LD
CASE 340AS
ISSUE O

DATE 30 SEP 2016



PRODUCTION CODE	TERMINAL LENGTH "D"	TERMINAL LENGTH "E"
TSSTU	3.45 - 4.05	6.45 - 7.45
TSTU	2.36 - 2.96	5.36 - 6.36
NONE (STD LENGTH)	12.76 - 13.36	15.76 - 16.76

NOTES:

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- B. ALL DIMENSIONS ARE IN MILLIMETERS
- C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR PROTRUSIONS

D FOR TERMINAL LENGTH "D", REFER TO TABLE
E FOR TERMINAL LENGTH "E", REFER TO TABLE

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