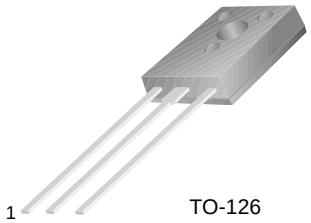
FAIRCHILD
SEMICONDUCTOR TM

KSA1381

CRT Display, Video Output

- High Collector-Emitter Breakdown Voltage : V_{CEO}= -300V
- Low Reverse Transfer Capacitance : C_{re}= 2.3pF at V_{CB} = -30V



TO-126

1. Emitter 2.Collector 3.Base

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	- 300	V
V_{CEO}	Collector-Emitter Voltage	- 300	V
V_{EBO}	Emitter-Base Voltage	- 5	V
I_C	Collector Current (DC)	- 100	mA
I_{CP}	Collector Current (Pulse)	- 200	mA
P_C	Collector Dissipation (T_C=25°C)	7	W
P_C	Collector Dissipation (T_a=25°C)	1.2	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C = - 10μA, I_E = 0	- 300			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = - 1mA, I_B = 0	- 300			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = - 10μA, I_C = 0	- 5			V
I_{CBO}	Collector Cut-off Current	V_{CB} = - 200V, I_E = 0			- 0.1	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = - 4V, I_C = 0			- 0.1	μA
h_{FE}	DC Current Gain	V_{CE} = - 10V, I_C = - 10mA	40		320	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = - 20mA, I_B = - 2mA			- 0.6	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = - 20mA, I_B = - 2mA			- 1	V
f_T	Current Gain Bandwidth Product	V_{CE} = - 30V, I_C = - 10mA		150		MHz
C_{ob}	Output Capacitance	V_{CB} = - 30V, f = 1MHz		3.1		pF
C_{re}	Reverse Transfer Capacitance	V_{CB} = - 30V, f = 1MHz		2.3		pF

h_{FE} Classification

Classification	C	D	E	F
h_{FE}	40 ~ 80	60 ~ 120	100 ~ 200	160 ~ 320

Typical Characteristics

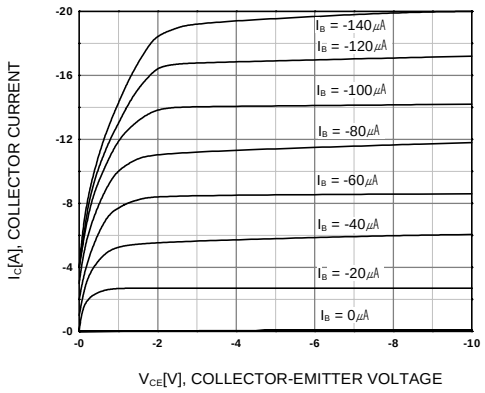


Figure 1. Static Characteristic

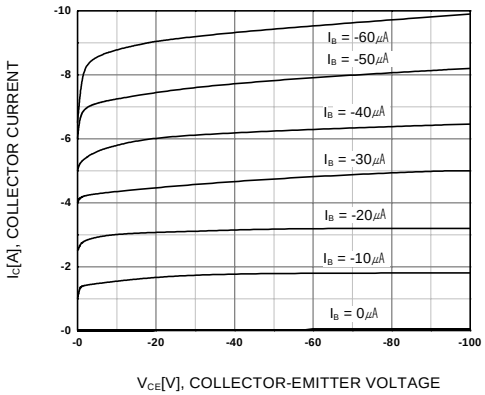


Figure 2. Static Characteristic

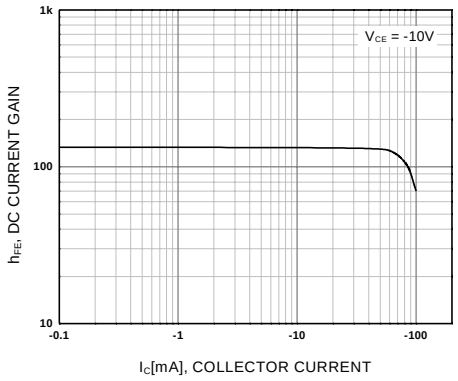


Figure 3. DC current Gain

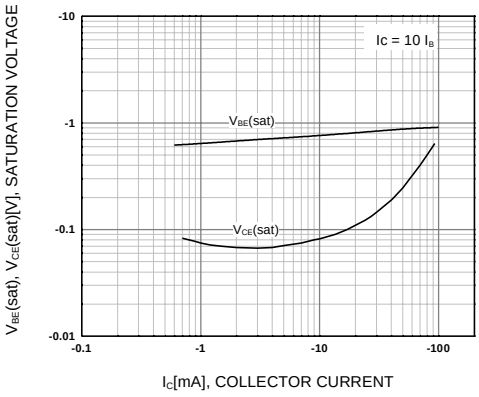


Figure 4. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

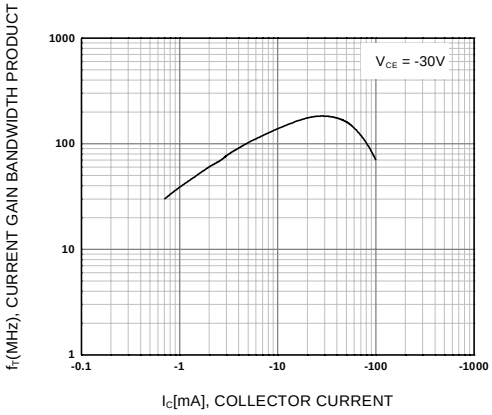


Figure 5. Current Gain Bandwidth Product

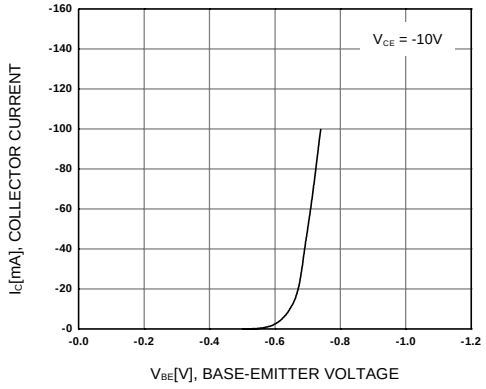


Figure 6. Base-Emitter On Voltage

Typical Characteristics (Continued)

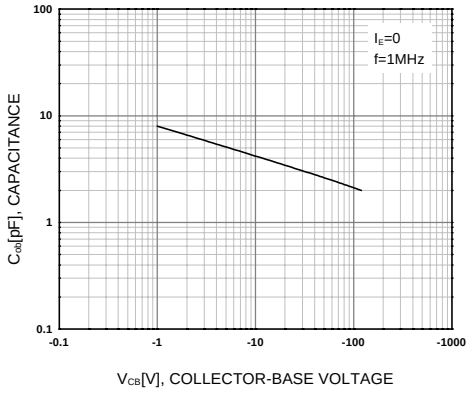


Figure 7. Collector Output Capacitance

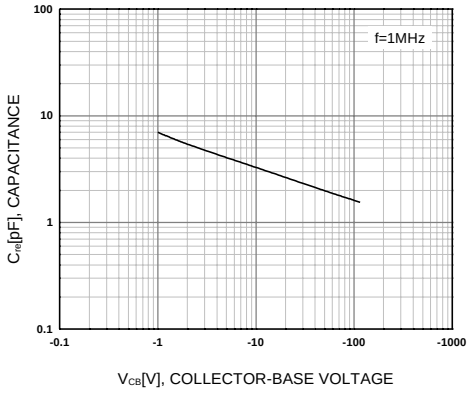


Figure 8. Reverse Transfer Capacitance

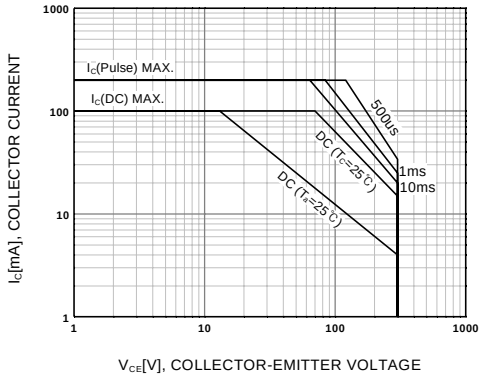


Figure 9. Safe Operating Area

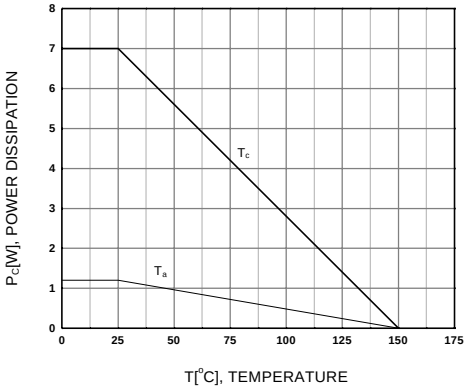
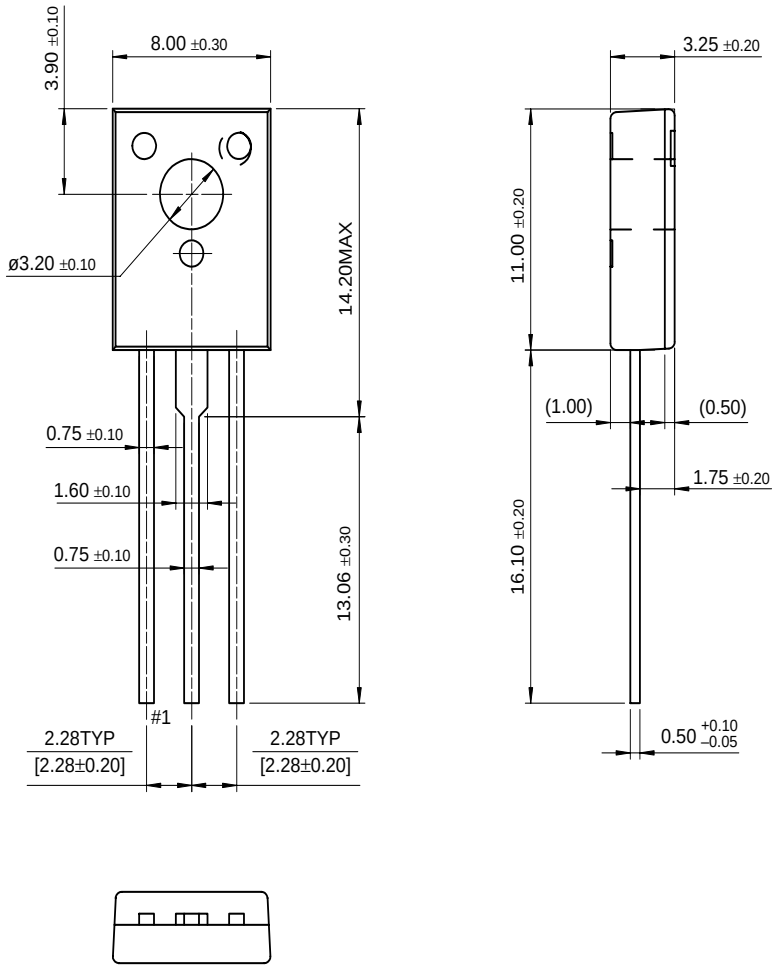


Figure 10. Power Derating

Package Demensions

TO-126



Dimensions in Millimeters

TRADEMARKS

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

ACEx™
Bottomless™
CoolFET™
CROSSVOLT™
E^2CMOS™
FACT™
FACT Quiet Series™
FAST®
FASTr™
GTO™
HiSeC™
ISOPLANAR™
MICROWIRE™
POP™
PowerTrench®
QFET™
QS™
Quiet Series™
SuperSOT™-3
SuperSOT™-6
SuperSOT™-8
SyncFET™
TinyLogic™
UHC™
VCX™

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR INTERNATIONAL.

As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, or (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

KSA1381

PNP Epitaxial Silicon Transistor

Contents

•Features
•Product status/pricing/packaging
•Order Samples
•Models
•Qualification Support

BUY

Datasheet
Download this datasheet

e-mail this datasheet

This page
Print version

Related Links

- Request samples
- How to order products
- Product Change Notices (PCNs)
- Support
- Sales support
- Quality and reliability
- Design center

Features

CRT Display, Video Output

- High Collector-Emitter Breakdown Voltage: V_{CEO}=-300V
- Low Reverse Transfer Capacitance: C_{re}=2.9pF at V_{CB}=-30V

back to top

Product status/pricing/packaging

BUY

Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
KSA1381ES	Full Production	Full Production	$0.151	TO-126	3	BULK	Line 1: **$Y** (Fairchild logo) **&3** (3-Digit Date Code) Line 3: A1381-C
KSA1381ESTSSTU	Full Production	Full Production	$0.151	TO-126	3	RAIL	Line 1: **$Y** (Fairchild logo) **&3** (3-Digit Date Code) Line 3: A1381-C
KSA1381ESTSTU	Full Production	Full Production	$0.151	TO-126	3	RAIL	Line 1: **$Y** (Fairchild logo) **&3** (3-Digit Date Code) Line 3: A1381-C
							Line 1: **$Y** (Fairchild logo)

KSA1381ESTU	Full Production	Full Production	$0.151	TO-126	3	RAIL	&**3** (3-Digit Date Code) Line 3: A1381-C

* Fairchild 1,000 piece Budgetary Pricing
** A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a Fairchild distributor to obtain samples

Indicates product with Pb-free second-level interconnect. For more information click here.

Package marking information for product KSA1381 is available. Click here for more information .

back to top

Models

Package & leads	Condition	Temperature range	Vcc range	Software version	Revision date
PSPICE					
TO-126-3	Electrical	-55°C to 150°C	0V to 10V	OrCAD 10.3	May 11, 2007

back to top

Qualification Support

Click on a product for detailed qualification data

Product
KSA1381ES
KSA1381ESTSSTU
KSA1381ESTSTU
KSA1381ESTU

back to top