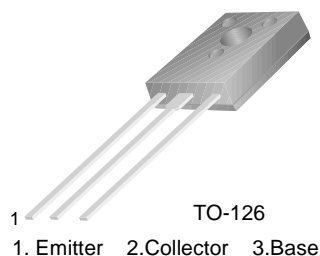


# KSA1381

KSA1381

## CRT Display, Video Output

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



## PNP Epitaxial Silicon Transistor

### Absolute Maximum Ratings $T_C = 25^\circ C$ 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 ( $T_C = 25^\circ C$ )	7	W
$P_C$	Collector Dissipation ( $T_a = 25^\circ C$ )	1.2	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{STG}$	Storage Temperature	- 55 ~ 150	$^\circ C$

### Electrical Characteristics $T_C = 25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = -10\mu A, I_E = 0$	- 300			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -1mA, I_B = 0$	- 300			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\mu A, I_C = 0$	- 5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = -200V, I_E = 0$			- 0.1	$\mu A$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = -4V, I_C = 0$			- 0.1	$\mu A$
$h_{FE}$	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

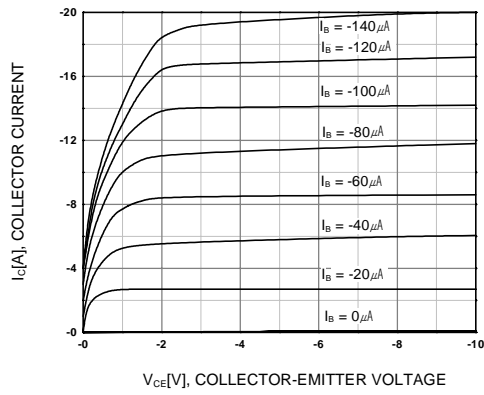


Figure 1. Static Characteristic

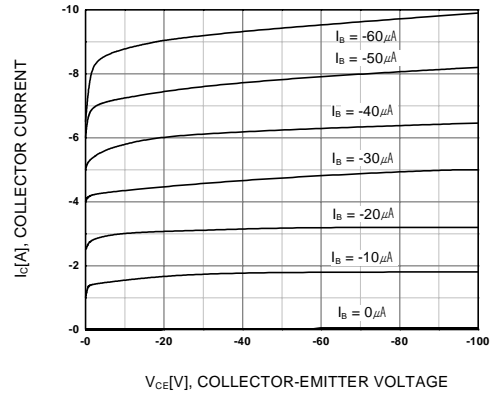


Figure 2. Static Characteristic

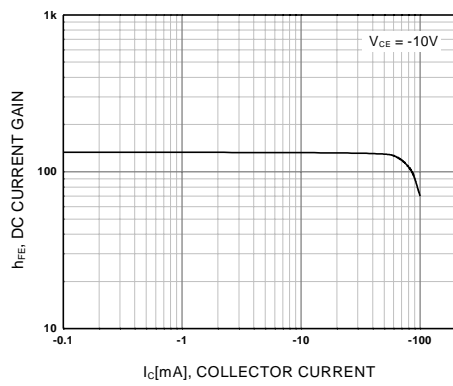


Figure 3. DC current Gain

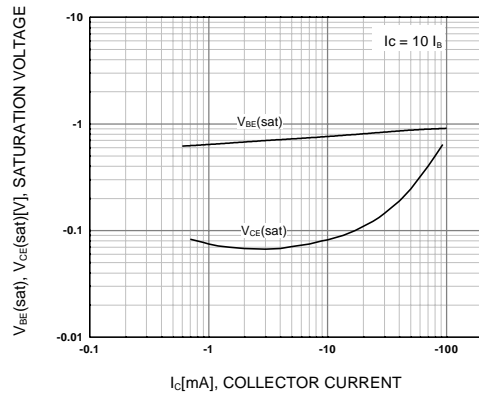


Figure 4. Base-Emitter Saturation Voltage  
Collector-Emmitter Saturation Voltage

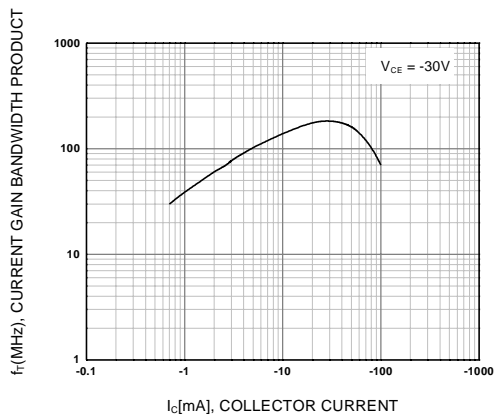


Figure 5. Current Gain Bandwidth Product

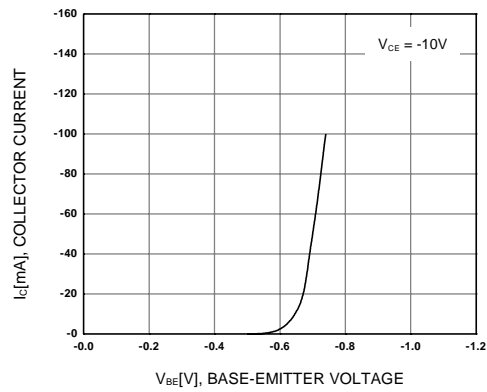


Figure 6. Base-Emitter On Voltage

Typical Characteristics (Continued)

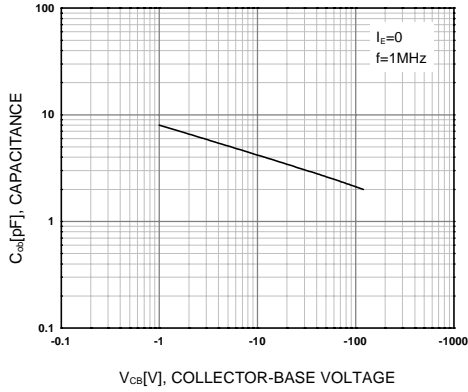


Figure 7. Collector Output Capacitance

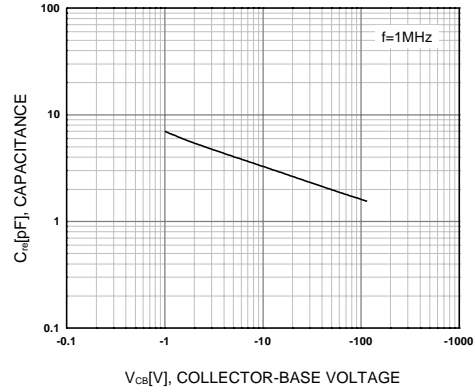


Figure 8. Reverse Transfer Capacitance

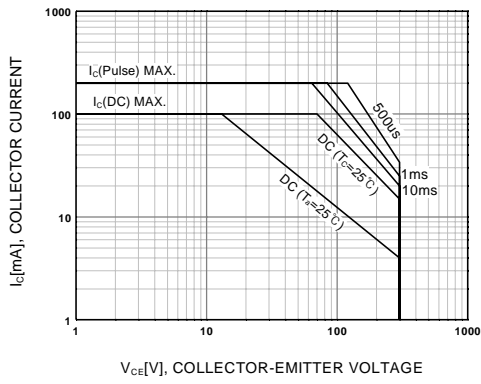


Figure 9. Safe Operating Area

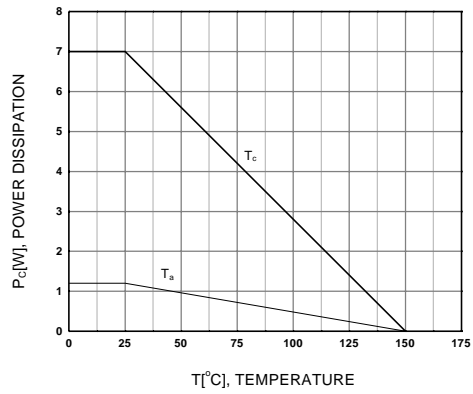


Figure 10. Power Derating

# Package Dimensions

KSA1381

## TO-126



Dimensions in Millimeters

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FAST®	Quiet Series™	
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GTO™	SuperSOT™-6	

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