

# 2SA2167

FOR HIGH CURRENT DRIVE APPLICATION  
SILICON PNP EPITAXIAL TYPE

## DESCRIPTION

2SA2167 is a silicon PNP epitaxial type transistor. It is designed with high voltage, high Collector current, high Collector dissipation.

## FEATURE

- High voltage  $V_{CE0} = -60V$
- High Collector current  $I_C = -2A$
- Low Collector to Emitter saturation voltage  
 $V_{CE(sat)} = 0.5V_{MAX}$  ( $@I_C = -1A / I_B = -50mA$ )
- High Collector dissipation  $PC = 500mW$

## APPLICATION

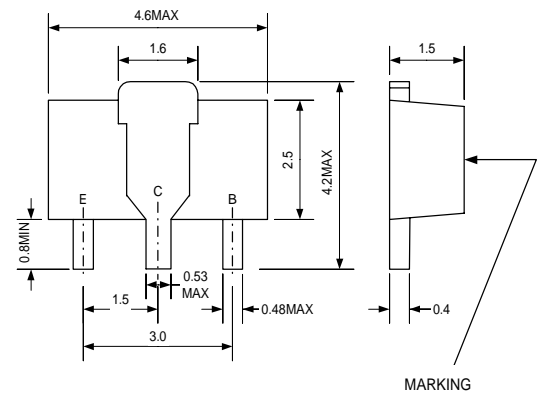
Audiovisual apparatus, VTR, Relay drive

## MAXIMUM RATINGS (Ta=25 )

Symbol	Parameter	Ratings	Unit
$V_{CBO}$	Collector to Base voltage	-60	V
$V_{EBO}$	Emitter to Base voltage	-6	V
$V_{CEO}$	Collector to Emitter voltage	-60	V
$I_C$	Collector current	-2	A
$I_{CM}$	Peak Collector current	-3	A
$PC$	Collector dissipation	500	mW
$T_j$	Junction temperature	150	
$T_{stg}$	Storage temperature	-55 ~ 150	

## OUTLINE DRAWING

Unit : mm

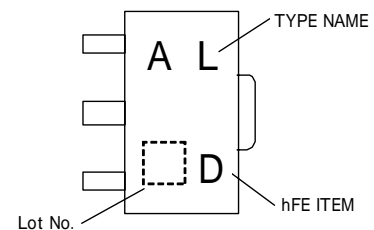


## TERMINAL CONNECTOR

- : BASE
- : EMITTER
- : COLLECTOR

JEITA : SC-62  
JEDEC : SOT-89

## MARKING



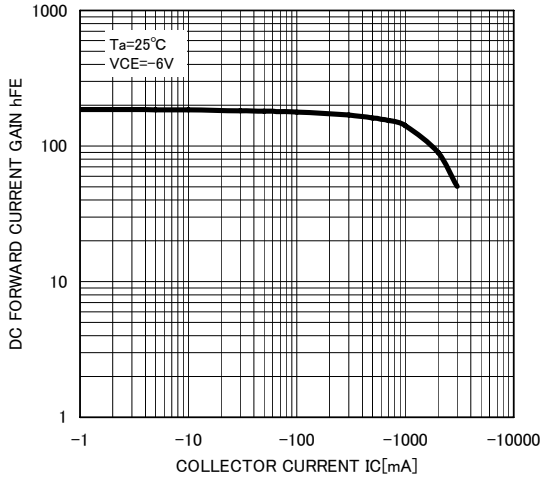
## ELECTRICAL CHARACTERISTICS (Ta=25 )

Symbol	Parameter	Test condition	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	Collector to Base brake down voltage	$I_C = -10\mu A, I_E = 0mA$	-60			V
$V_{(BR)EBO}$	Emitter to Base brake down voltage	$I_E = -10\mu A, I_C = 0mA$	-6			V
$V_{(BR)CEO}$	Collector to Emitter brake down voltage	$I_C = -2mA, R_{BE} =$	-60			V
$I_{CBO}$	Collector cut off current	$V_{CB} = -50V, I_E = 0mA$			-0.2	$\mu A$
$I_{EBO}$	Emitter cut off current	$V_{EB} = -4V, I_C = 0mA$			-0.2	$\mu A$
$h_{FE}$	DC forward current gain	$V_{CE} = -4V, I_C = -100mA$	55		300	-
$V_{CE(sat)}$	Collector to Emitter saturation voltage	$I_C = -1A, I_B = -50mA$		-0.2	-0.5	V
$f_T$	Gain band width product	$V_{CE} = -2V, I_E = 10mA$		65		MHz
$C_{ob}$	Collector output capacitance	$V_{CB} = 10V, I_E = 0mA, f = 1MHz$		23		pF

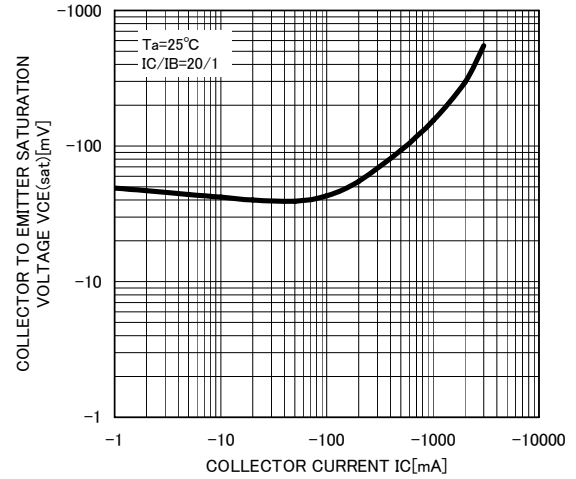
MARKING	C	D	E
hFE	55 ~ 110	90 ~ 180	150 ~ 300

## TYPICAL CHARACTERISTICS

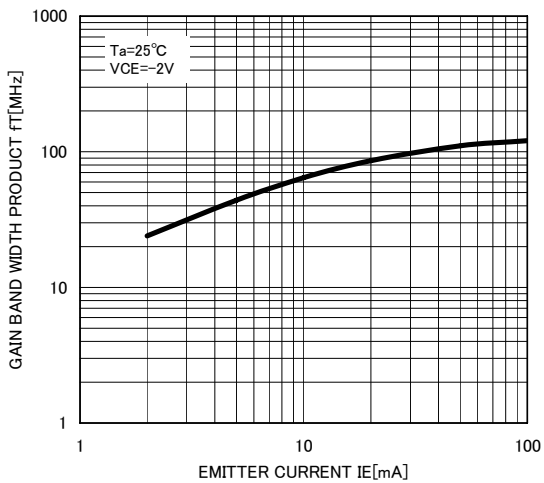
DC FORWARD CURRENT GAIN  
VS. COLLECTOR CURRENT



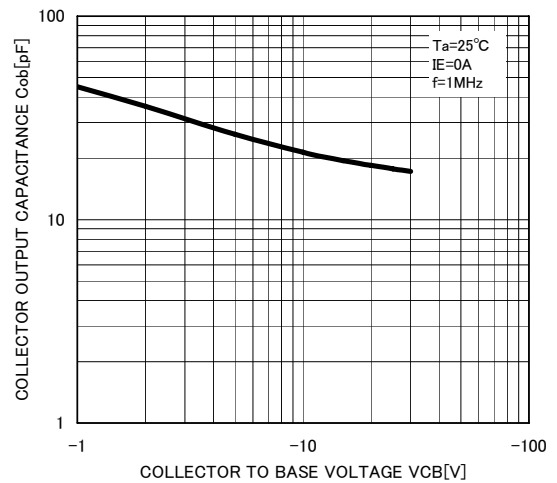
COLLECTOR TO EMITTER SATURATION VOLTAGE  
VS. COLLECTOR CURRENT



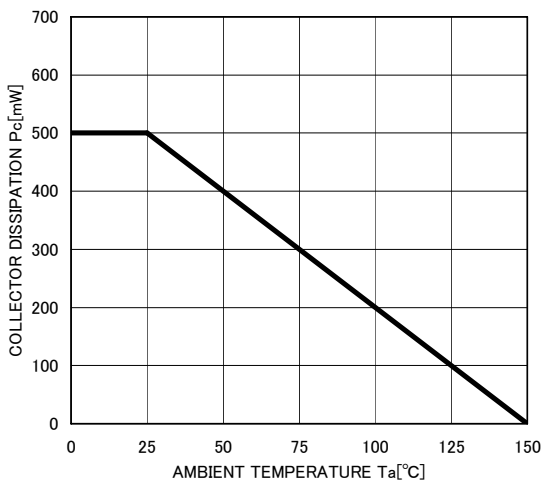
GAIN BAND WIDTH PRODUCT  
VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE  
VS. COLLECTOR TO BASE VOLTAGE



COLLECTOR DISSIPATION  
VS. AMBIENT TEMPERATURE





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