

2SA2167

FOR HIGH CURRENT DRIVE APPLICATION
SILICON PNP EPITAXIAL TYPE

DESCRIPTION

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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

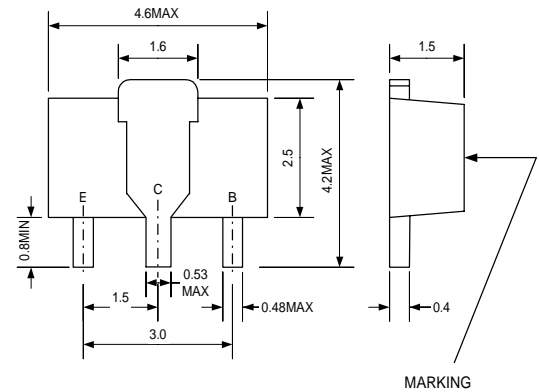
Audiovisual apparatus, VTR, Relay drive

MAXIMUM RATINGS ($T_a = 25$)

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

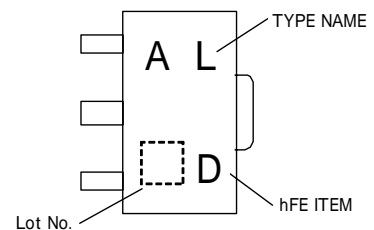


TERMINAL CONNECTOR

- : BASE
- : EMITTER
- : COLLECTOR

JEITA : SC-62
JEDEC : SOT-89

MARKING



ELECTRICAL CHARACTERISTICS ($T_a = 25$)

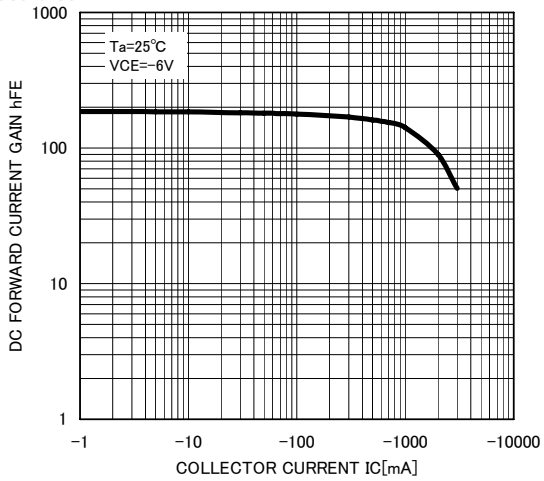
Symbol	Parameter	Test condition	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	Collector to Base brake down voltage	$I_C = -10\mu A, I_E = 0mA$	-60			V
$V_{(BR)EBO}$	Emitter to Base brake down voltage	$I_E = -10\mu A, I_C = 0mA$	-6			V
$V_{(BR)CEO}$	Collector to Emitter brake down voltage	$I_C = -2mA, R_{BE} =$	-60			V
I_{CBO}	Collector cut off current	$V_{CB} = -50V, I_E = 0mA$			-0.2	μA
I_{EBO}	Emitter cut off current	$V_{EB} = -4V, I_C = 0mA$			-0.2	μA
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
h_{FE}	55 ~ 110	90 ~ 180	150 ~ 300

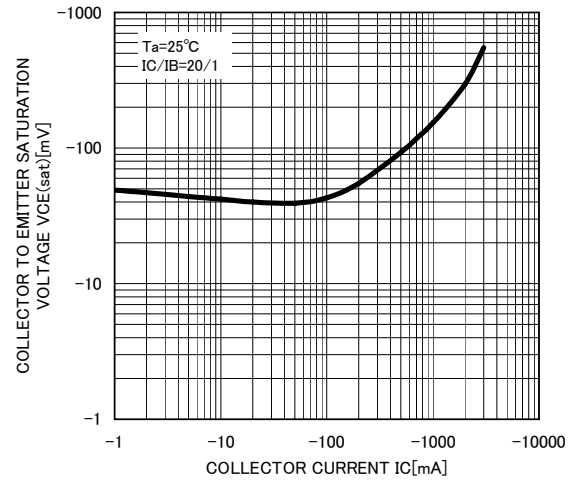
TYPICAL CHARACTERISTICS

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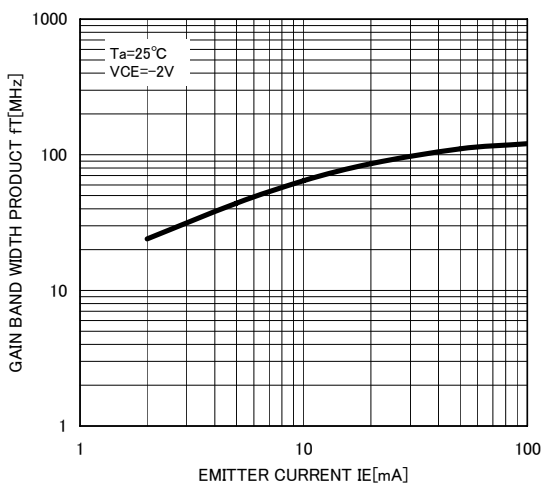
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



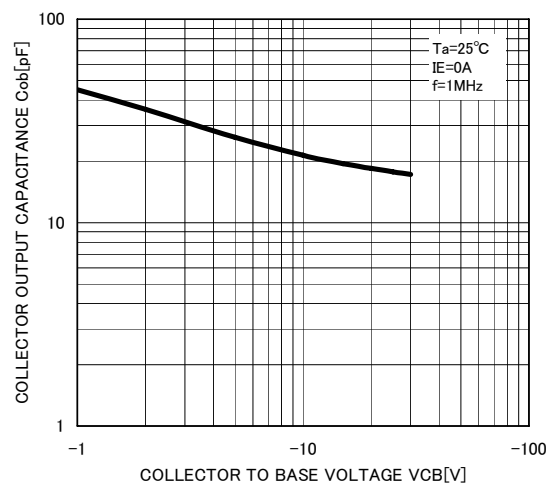
COLLECTOR TO EMITTER SATURATION VOLTAGE
VS. COLLECTOR CURRENT



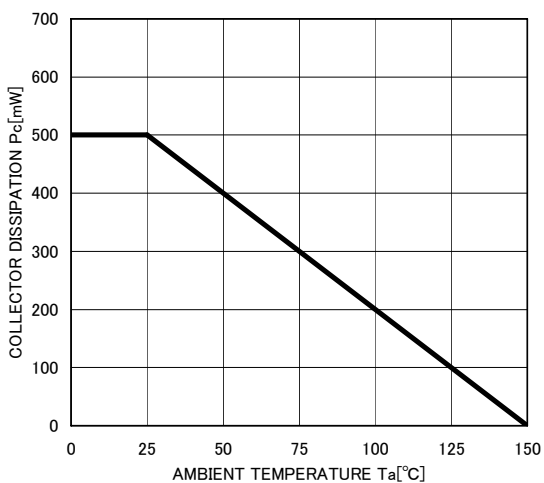
GAIN BAND WIDTH PRODUCT
VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BASE VOLTAGE



COLLECTOR DISSIPATION
VS. AMBIENT TEMPERATURE





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