〈SMALL-SIGNAL TRANSISTOR〉

2SC3247

FOR RELAY DRIVE, POWER SUPPLY APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

2SC3247 is a silicon NPN epitaxial type transistor. Designed with high voltage,high collector current, dissipation and high h_{FE}.

Complementary with 2SA1287.

FEATURE

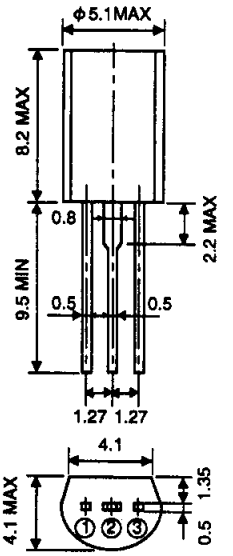
- High h_{FE} h_{FE}=600 to 1800
- High voltage V_{CEO}=50V
- Low collector to emitter saturation voltage
  $V_{CE(sat)}$=0.15V (@ I_C=500mA, I_B=10mA)
- High collector dissipation P_C=900mW

APPLICATION

Relay drive or power supply for audio machine, VCR, and other electronic machine.

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

①: EMITTER
②: COLLECTOR EIAJ: —
③: BASE JEDEC: —

Note)
The dimension without tolerance represent central value.

MAXIMUM RATINGS (Ta=25℃)

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	50	V
V_{EBO}	Emitter to Base voltage	6	V
V_{CEO}	Collector to Emitter voltage	50	V
I_{CM}	Peak collector current	2	A
I_C	Collector current	1	A
P_C	Collector dissipation(Ta=25℃)	900	mW
T_j	Junction temperature	+150	℃
T_{stg}	Storage temperature	-55 to +150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	I_C=10μA,I_E=0	50			V
$V_{(BR)EBO}$	E to B break down voltage	I_E=10μA,I_C=0	6			V
$V_{(BR)CEO}$	C to E break down voltage	I_C=1mA,R_{BE}=∞	50			V
I_{CBO}	Collector cut off current	V_{CB}=40V,I_E=0			0.1	μA
I_{EBO}	Emitter cut off current	V_{EB}=2V,I_C=0			0.1	μA
h_{FE} *	DC forward current gain	V_{CE}=6V,I_C=100mA	600		1800	—
$V_{CE(sat)}$	C to E saturation voltage	I_C=500mA,I_B=10mA		0.15	0.5	V
f_T	Gain band width product	V_{CE}=10V,I_E=-10mA		130		MHz
C_{ob}	Collector output capacitance	V_{CB}=10V,I_E=0,f=1MHz		12		pF

* It shows h_{FE} classification in right table.

Item	H	J
h_{FE}	600 to 1200	900 to 1800

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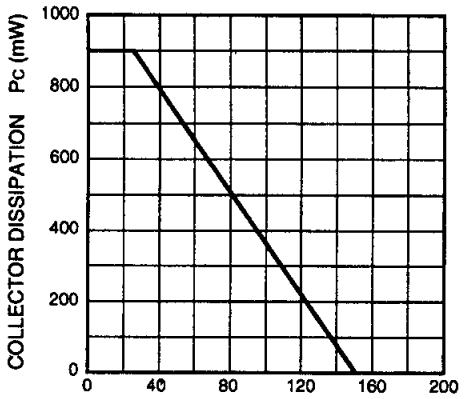
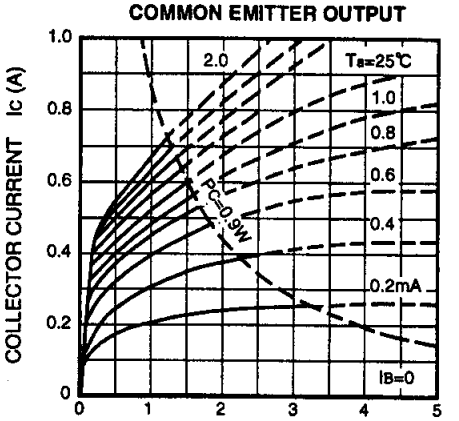
TYPICAL CHARACTERISTICS

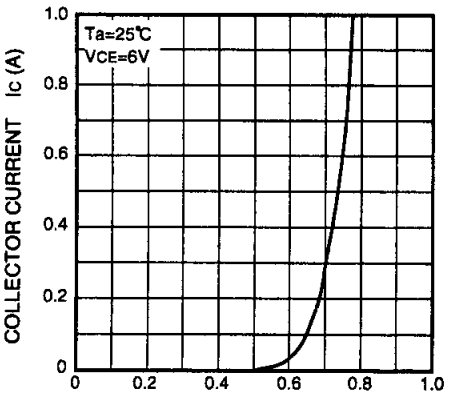
COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE



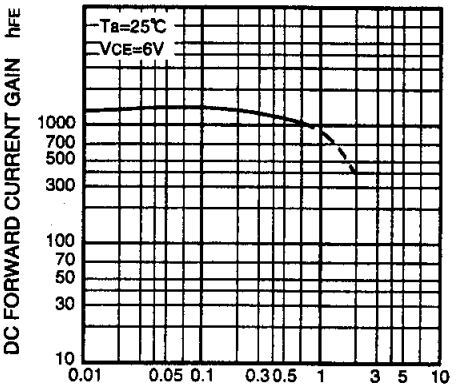
COMMON EMITTER OUTPUT



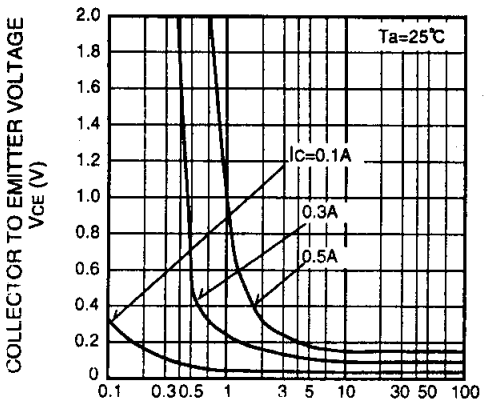
COMMON EMITTER TRANSFER



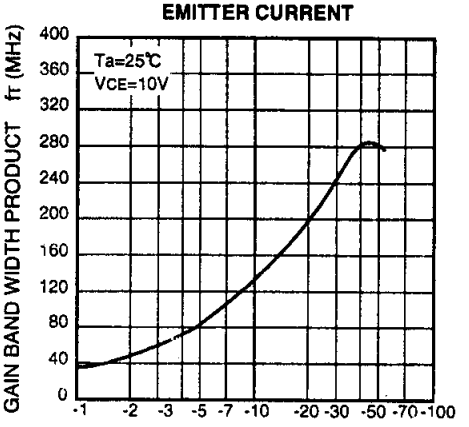
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT



GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



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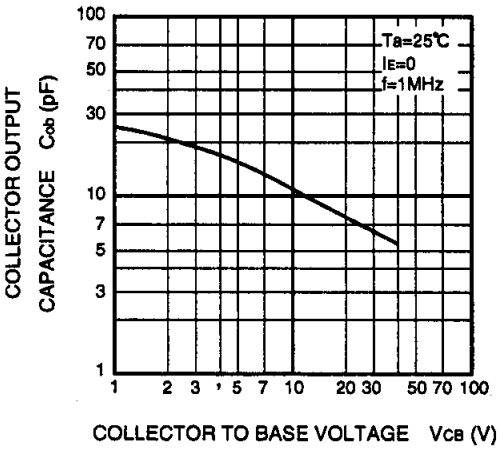
COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE



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