〈SMALL-SIGNAL TRANSISTOR〉

2SC3443

FOR HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

2SC3443 is a silicon NPN epitaxial type transistor designed for small type motor drive, power supply application.

Complementary with 2SA1363.

FEATURE

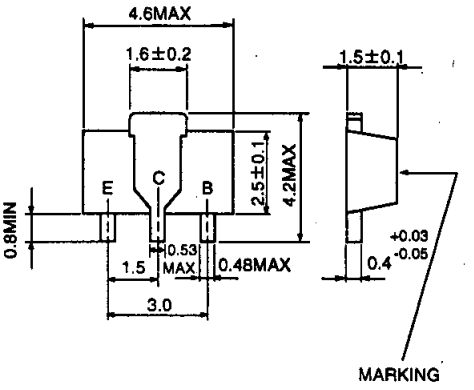
- ●High h_{FE} h_{FE}=150 to 800
- ●High collector current (I_C=2A)
- ●Low collector to emitter saturation voltage
  $V_{CE(sat)}$=0.17 V typ(@I_C=1A, I_B=50mA)
- ●High collector dissipation P_C=500mW
- ●Small package for mounting

APPLICATION

Small type motor drive for VCR, deck,player, power supply, etc.

OUTLINE DRAWING

Unit:mm



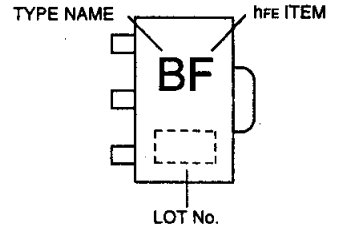
TERMINAL CONNECTOR

E : EMITTER
C : COLLECTOR
B : BASE

EIAJ : SC-62
JEDEC : –

Note)
The dimension without tolerance represent central value.

MARKING



MAXIMUM RATINGS (Ta=25℃)

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	20	V
V_{EBO}	Emitter to Base voltage	6	V
V_{CEO}	Collector to Emitter voltage	16	V
I_{CM}	Peak collector current	3	A
I_C	Collector current	2	A
P_C	Collector dissipation(Ta=25℃)	500	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	20			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=2mA,R_{BE}=∞	16			V
I_{CBO}	Collector cut off current	V_{CB}=16V,I_E=0			0.2	μA
I_{EBO}	Emitter cut off current	V_{EB}=4V,I_C=0			0.2	μA
h_{FE} *	DC forward current gain	V_{CE}=4V,I_C=100mA	150		800	—
$V_{CE(sat)}$	C to E saturation voltage	I_C=1A,I_B=50mA		0.17	0.3	V
f_T	Gain band width product	V_{CE}=2V,I_E=-10mA		80		MHz
C_{ob}	Collector output capacitance	V_{CB}=10V,I_E=0, f=1MHz		28		pF

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

Marking	BE	BF	BG
h_{FE}	150 to 300	250 to 500	400 to 800

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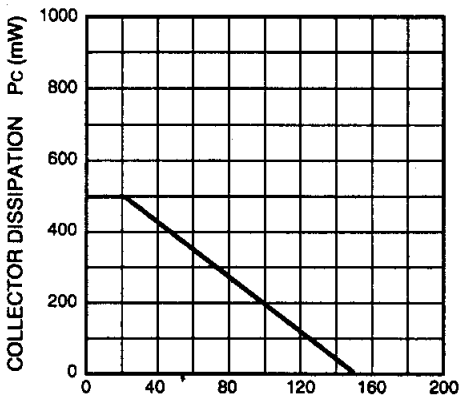
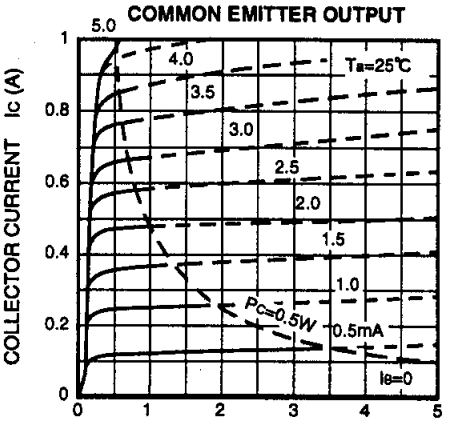
TYPICAL CHARACTERISTICS

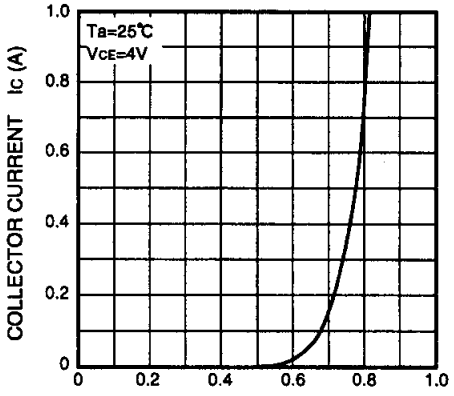
COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE



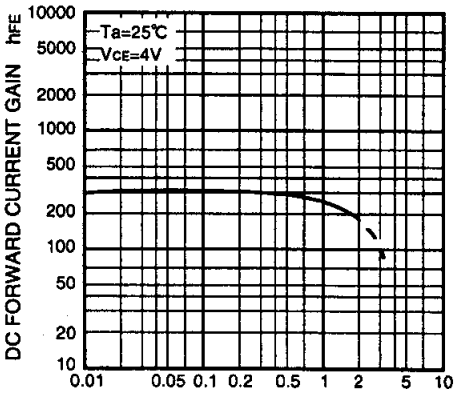
COMMON EMITTER OUTPUT



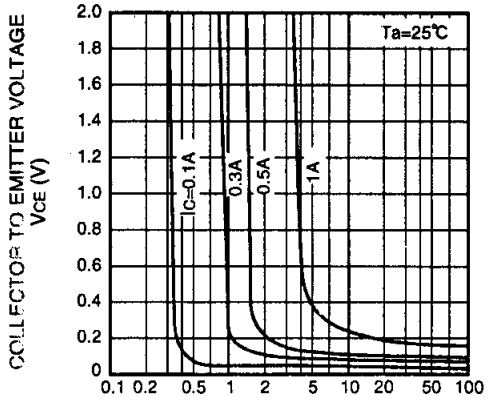
COMMON EMITTER TRANSFER



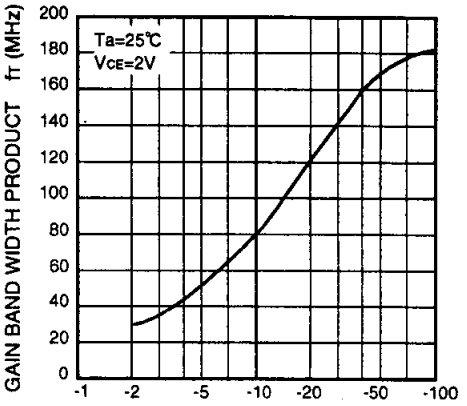
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT



GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



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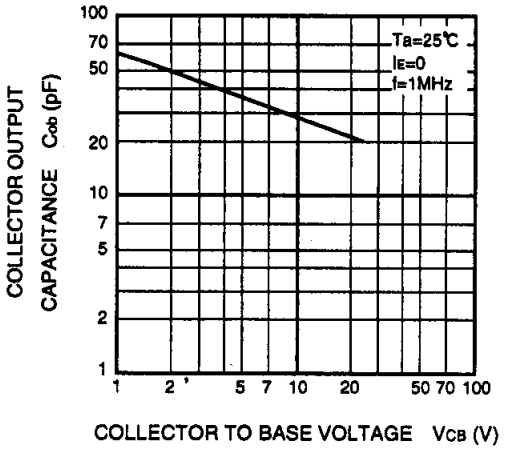
COLLECTOR OUTPUT CAPACITANCE VS.
COLLECTOR TO BASE VOLTAGE



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