2SC3443

FOR HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

2SC3443 is a silicon NPN epitaxial type transistor designed with high collector current and high collector dissipation.

Complementary with 2SA1363.

FEATURE

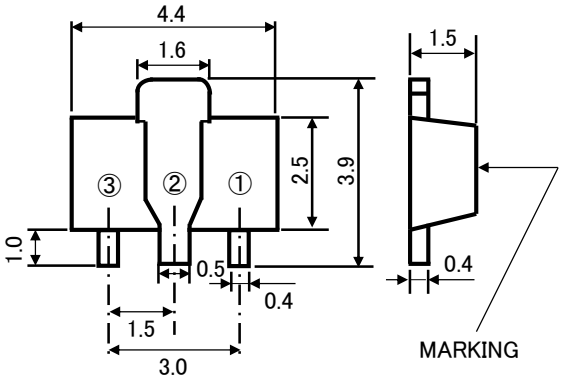
- ●High hFE hFE=150～800
- ●High collector current IC=2A
- ●Small collector to emitter saturation voltage
  VCE(sat)=0.17V type(@IC=1A/IB=50mA)
- ●High collector dissipation PC=500mW
- ●Small package for easy mounting

APPLICATION

Small type motor drive for VTR, deck, player, power supply

OUTLINE DRAWING

UNIT:mm



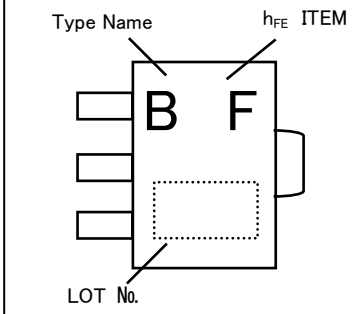
TERMINAL CONNECTOR
①:BASE
②:COLLECTOR
③:EMITTER

JEITA:SC-62
JEDEC:SOT-89

MAXIMUM RATING(Ta=25℃)

SYMBOL	PARAMETER	RATING	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_C	Collector current	2	A
I_{CM}	Peak collector current	3	A
P_C	Collector dissipation(Ta=25℃)	500	mW
T_j	Junction temperature	+150	℃
T_{stg}	Storage temperature	−55～+150	℃

MARKING



ELECTRICAL CHARACTERISTICS (Ta=25℃)

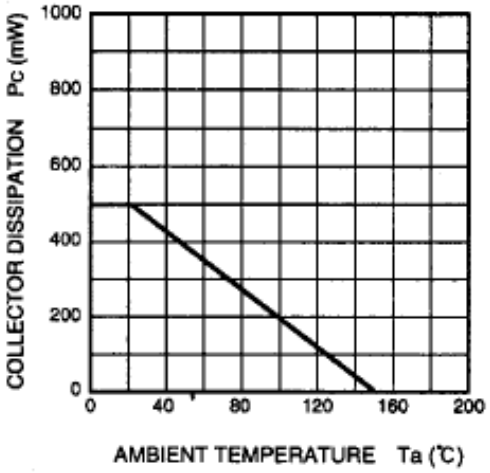
SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CBO}$	C to B breakdown voltage	I_C=10μA, I_E=0mA	20	−	−	V
$V_{(BR)EBO}$	E to B breakdown voltage	I_E=10μA, I_C=0mA	6	−	−	V
$V_{(BR)CEO}$	C to E breakdown voltage	I_C=2mA, R_{BE}=∞	16	−	−	V
I_{CBO}	Collector cut off current	V_{CB}=16V, 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	150	−	800	−
$V_{CE(sat)}$	C to E saturation voltage	I_C=1A, I_B=50mA	−	0.17	0.3	V
fT	Gain bandwidth product	V_{CE}=2V, I_E=−10mA	−	80	−	MHz
Cob	Collector output capacitance	V_{CB}=10V, I_E=0mA, f=1MHz	−	28	−	pF

※) It shows hFE classification at right table.

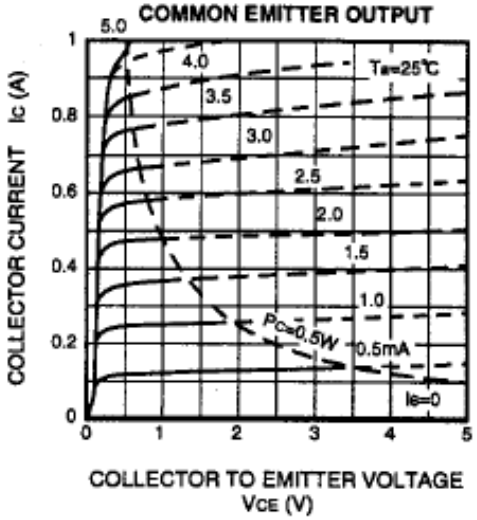
Item	E	F	G
hFE	150～300	250～500	400～800

TYPICIAL CHARACTERISTICS

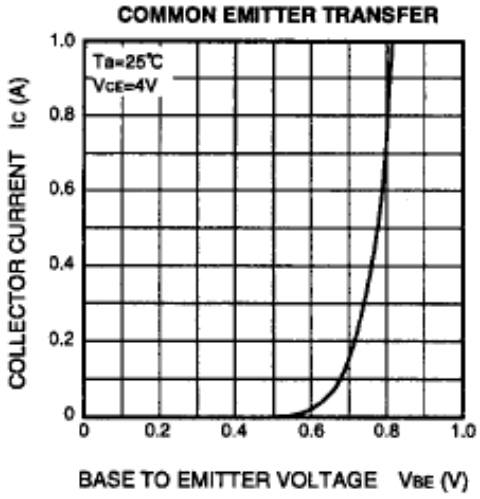
COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE



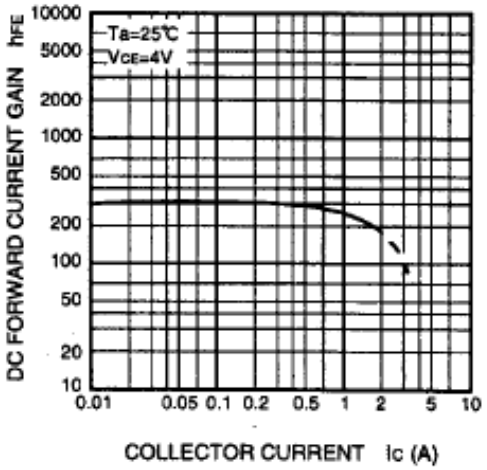
COMMON EMITTER OUTPUT



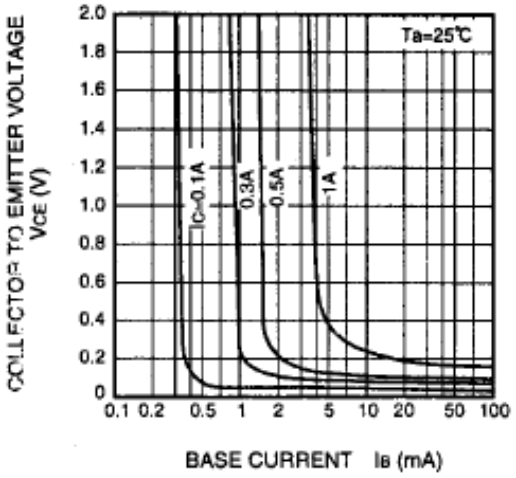
COMMON EMITTER TRANSFER



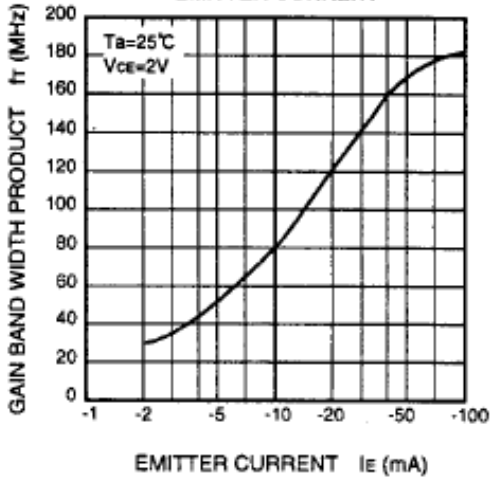
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT

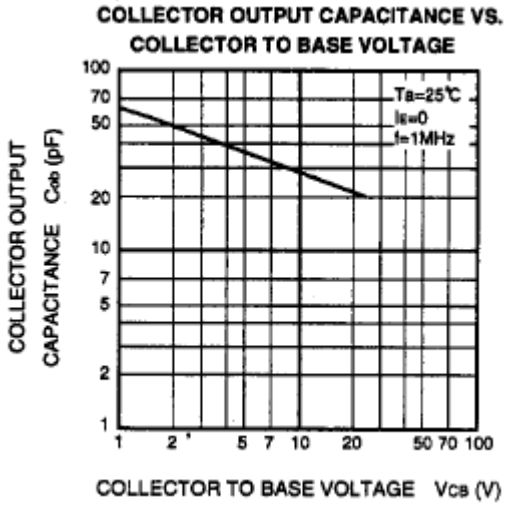


COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT



GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT




COLLECTOR OUTPUT CAPACITANCE VS.
COLLECTOR TO BASE VOLTAGE
COLLECTOR OUTPUT CAPACITANCE Cob (pF)
100
70
50
20
10
7
5
2
1
Ta=25℃
IE=0
f=1MHz
1
2
5
7
10
20
50
70
100
COLLECTOR TO BASE VOLTAGE VCB (V)

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