

(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**

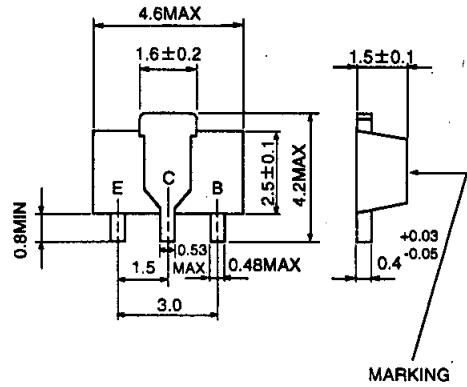
- High  $h_{FE}$   $h_{FE}=150$  to  $800$
- High collector current ( $I_C=2A$ )
- Low collector to emitter saturation voltage  
 $V_{CE(sat)}=0.17V$  typ (@  $I_C=1A, I_B=50mA$ )
- High collector dissipation  $P_C=500mW$
- Small package for mounting

**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 : -

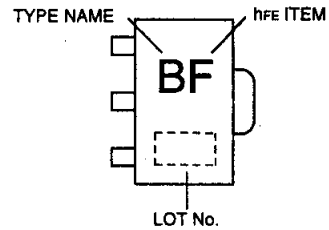
Note)

The dimension without tolerance represent central value.

**MAXIMUM RATINGS** ( $T_a=25^{\circ}C$ )

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( $T_a=25^{\circ}C$ )	500	mW
$T_j$	Junction temperature	+150	$^{\circ}C$
$T_{stg}$	Storage temperature	-55 to +150	$^{\circ}C$

**MARKING**



**ELECTRICAL CHARACTERISTICS** ( $T_a=25^{\circ}C$ )

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	$I_C=10\mu A, I_E=0$	20			V
$V_{(BR)EBO}$	E to B break down voltage	$I_E=10\mu A, I_C=0$	6			V
$V_{(BR)CEO}$	C to E break down voltage	$I_C=2mA, R_{BE}=\infty$	16			V
$I_{CBO}$	Collector cut off current	$V_{CB}=16V, I_E=0$			0.2	$\mu A$
$I_{EBO}$	Emitter cut off current	$V_{EB}=4V, I_C=0$			0.2	$\mu A$
$h_{FE} *$	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
$f_r$	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

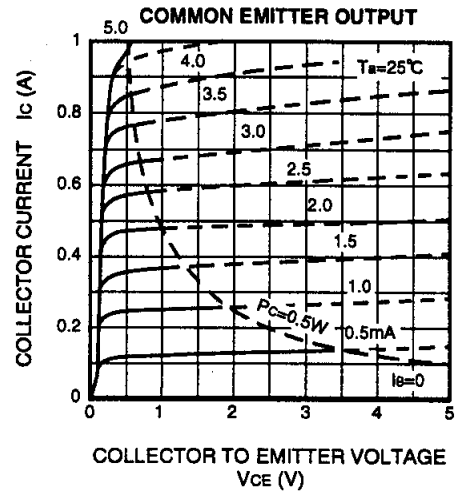
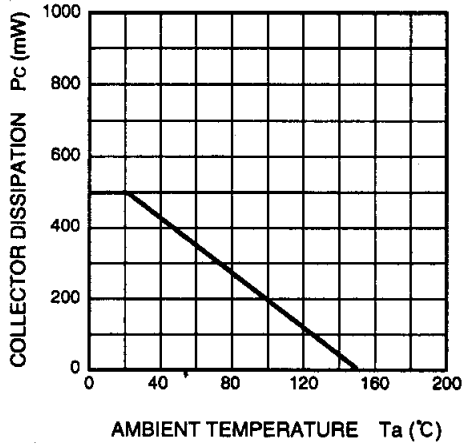
\* : It shows  $h_{FE}$  classification in right table

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

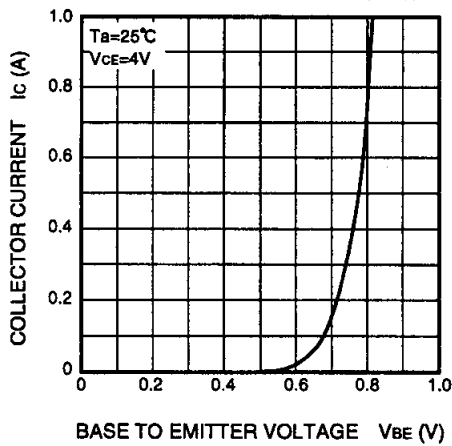
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**TYPICAL CHARACTERISTICS**

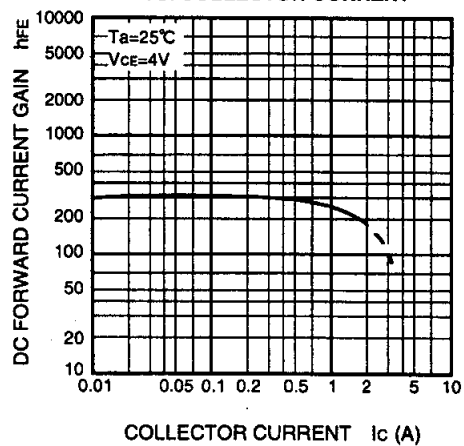
**COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE**



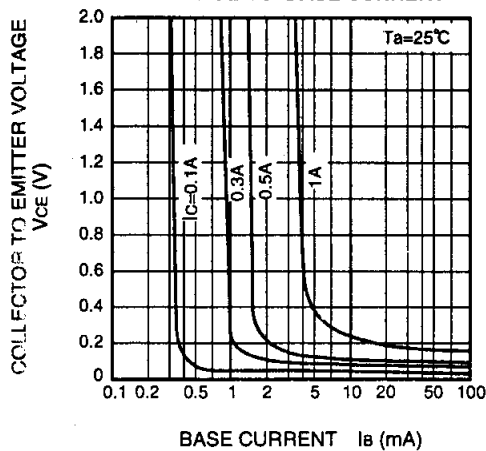
**COMMON EMITTER TRANSFER**



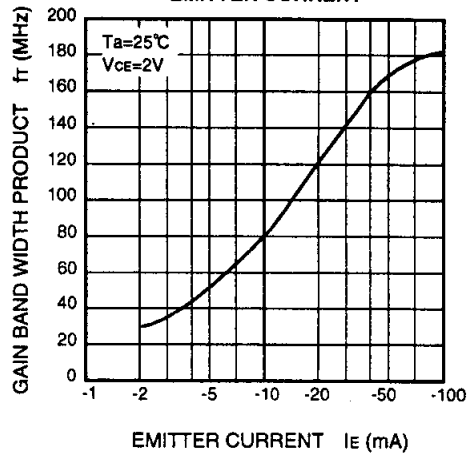
**DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT**



**COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT**



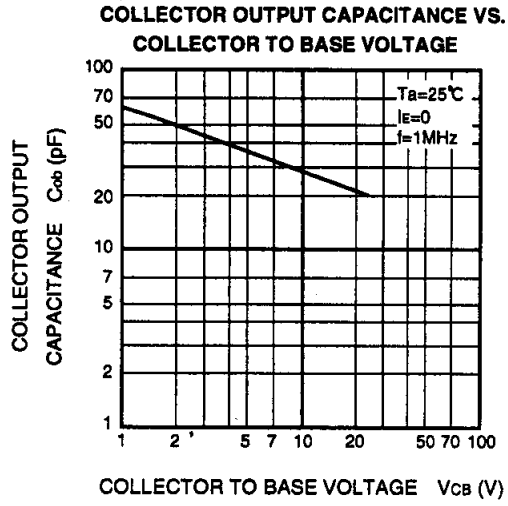
**GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT**



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