

2SC6046

FOR GENERAL PURPOSE HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

2SC6046 is a silicon NPN epitaxial type transistor designed with high collector current, low $V_{CE(sat)}$.

FEATURE

High collector current

$$I_{C(MAX)}=600mA$$

Low collector to emitter saturation voltage

$$V_{CE(sat)} < 0.3V_{max}(I_C=150mA, I_B=15mA)$$

APPLICATION

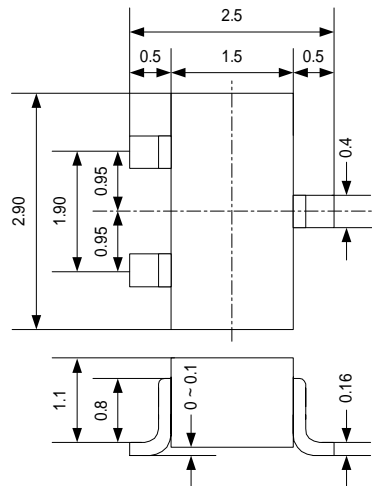
For switching application, small type motor drive application.

MAXIMUM RATINGS (Ta=25)

記号	項目	定格値	単位
V_{CEO}	Collector to Emitter voltage	40	V
V_{CBO}	Collector to Base voltage	75	V
V_{EBO}	Emitter to Base voltage	6	V
I_C	Collector current	600	mA
P_C	Collector dissipation	200	mW
T_j	Junction temperature	+150	
T_{stg}	Storage temperature	-55 ~ +150	

OUTLINE DRAWING

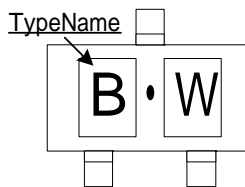
Unit : mm



TERMINAL CONNECTOR

: BASE EIAJ : SC-59
: EMITTER JEDEC : TO-236
: COLLECTOR Resemblance

MARKING

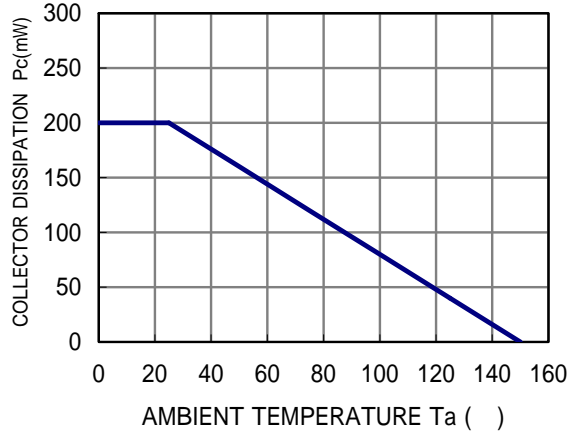


ELECTRICAL CHARACTERISTICS (Ta=25)

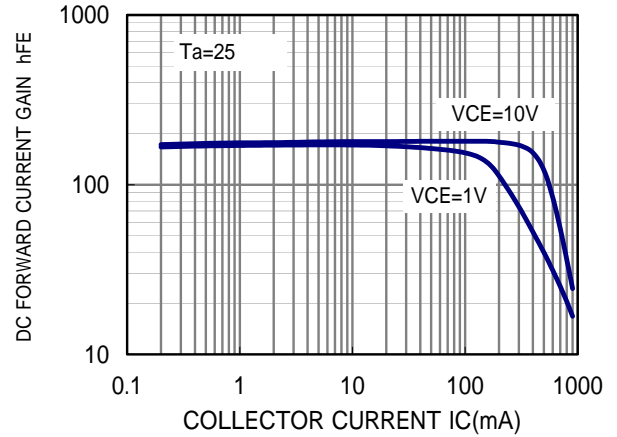
Symbol	Parameter	Test condition	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CEO}$	C to E break down voltage	$I_C=1mA, I_B=0$	40			V
$V_{(BR)CBO}$	C to B break down voltage	$I_C=10\mu A, I_E=0$	75			V
$V_{(BR)EBO}$	E to B break down voltage	$I_E=10\mu A, I_C=0$	6			V
I_{CBO}	Collector cut off current	$V_{CB}=60V, I_E=0$			100	nA
I_{EBO}	Emitter cut off current	$V_{EB}=3V, I_C=0$			100	nA
h_{FE}	DC forward current gain	$I_C=150mA, V_{CE}=10V$	100		300	---
$V_{CE(sat)}$	C to E saturation voltage	$I_C=150mA, I_B=15mA$			0.3	V
$V_{BE(sat)}$	B to E saturation voltage	$I_C=150mA, I_B=15mA$	0.6		1.2	V
f_T	Gain band width product	$I_E=-20mA, V_{CE}=20V, f=100MHz$		250		MHz
C_{ob}	Collector output capacitance	$V_{CB}=10V, f=1MHz$			8	pF

TYPICAL CHARACTERISTICS

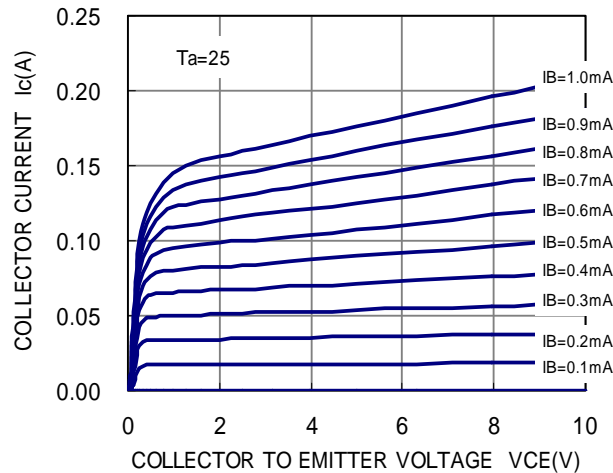
COLLECTOR DISSIPATION VS.
AMBIENT TEMPERATURE



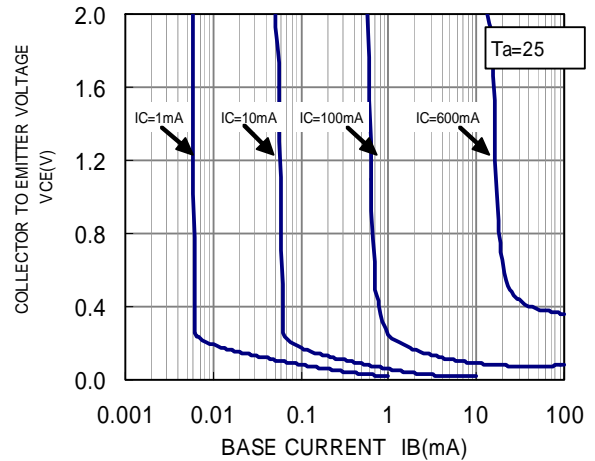
DC FORWARD CURRENT GAIN VS.
COLLECTOR CURRENT



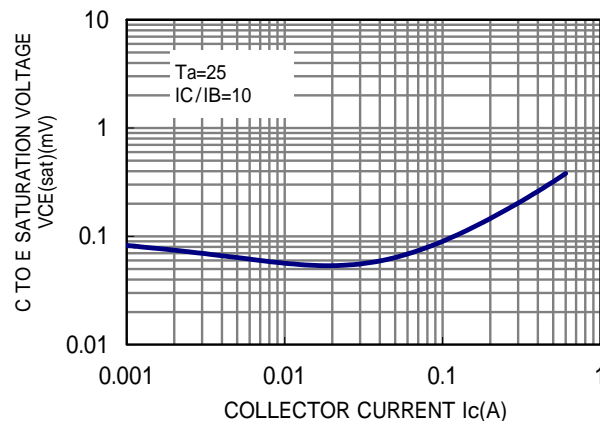
COMMON EMITTER OUTPUT



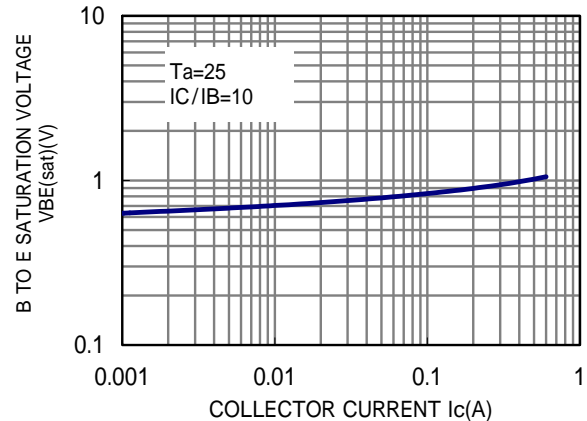
COLLECTOR TO EMITTER VOLTAGE VS.
BASE CURRENT



C TO E SATURATION VOLTAGE VS.
COLLECTOR CURRENT

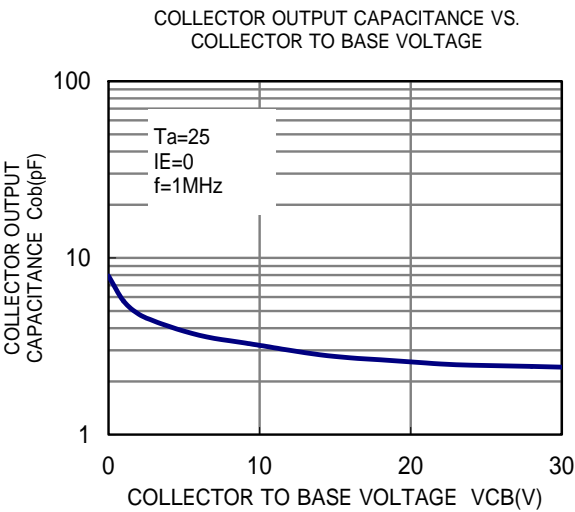
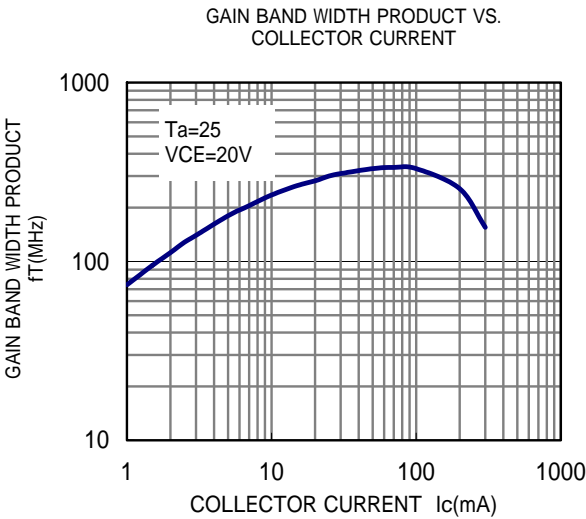


B TO E SATURATION VOLTAGE VS.
COLLECTOR CURRENT



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