2SC6046-T150

FOR GENERAL PURPOSE HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

AEC-Q101 Compliance

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

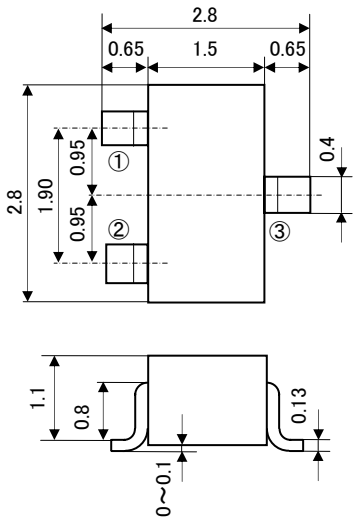
$V_{CE(sat)}$<0.3V_{max}(IC=150mA、IB=15mA)

APPLICATION

For switching application, small type motor drive application.

OUTLINE DRAWING

Unit:mm

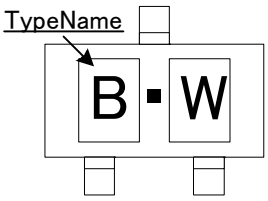


TERMINAL CONNECTOR
①:BASE
②:EMITTER
③:COLLECTOR
EIAJ:SC-59
JEDEC:Similar to TO-236

MAXIMUM RATINGS(Ta.=25℃)

Symbol	Parameter	Limits	Unit
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	℃

MARKING



ELECTRICAL CHARACTERISTICS(Ta.=25℃)

Symbol	Parameter	Test condition	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CEO}$	C to E breakdown voltage	IC=1mA、IB=0	40	—	—	V
$V_{(BR)CBO}$	C to B breakdown voltage	IC=10uA、IE=0	75	—	—	V
$V_{(BR)EBO}$	E to B breakdown voltage	IE=10uA、IC=0	6	—	—	V
I_{CBO}	Collector cut off current	VCB=60V、IE=0	—	—	100	nA
I_{EBO}	Emitter cut off current	VEB=3V、IC=0	—	—	100	nA
h_{FE}	DC forward current gain	IC=150mA、VCE=10V	100	—	300	—
$V_{CE(sat)}$	C to E saturation voltage	IC=150mA、IB=15mA	—	—	0.3	V
$V_{BE(sat)}$	B to E saturation voltage	IC=150mA、IB=15mA	0.6	—	1.2	V
f_T	Gain band width product	IE=−20mA、VCE=20V、f=100MHz	—	250	—	MHz
C_{ob}	Collector output capacitance	VCB=10V、f=1MHz	—	—	8	pF

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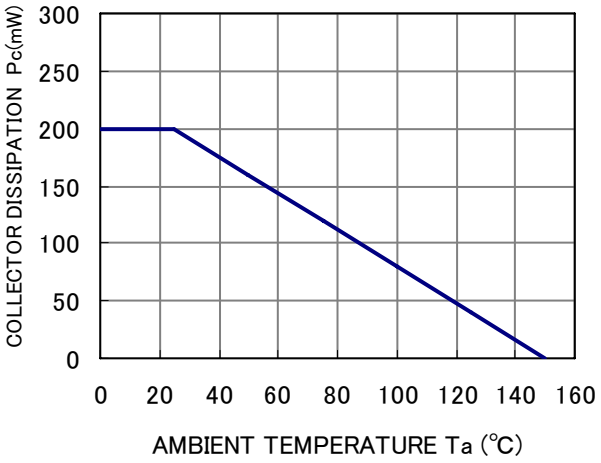
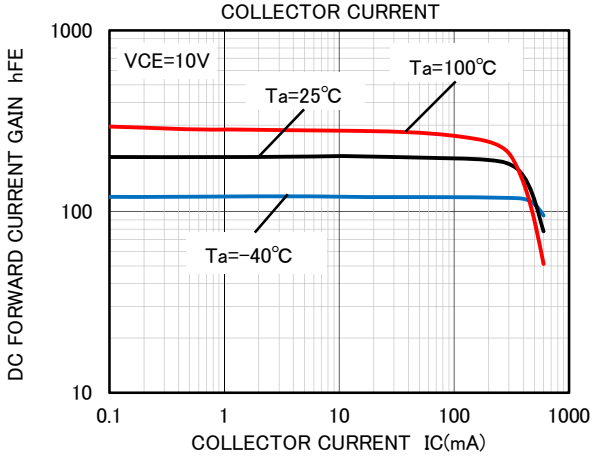
TYPICAL CHARACTERISTICS

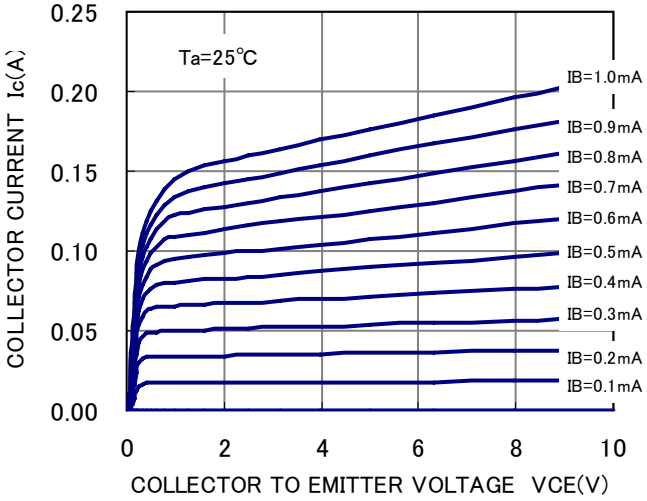
COLLECTOR DISSIPATION VS.
AMBIENT TEMPERATURE



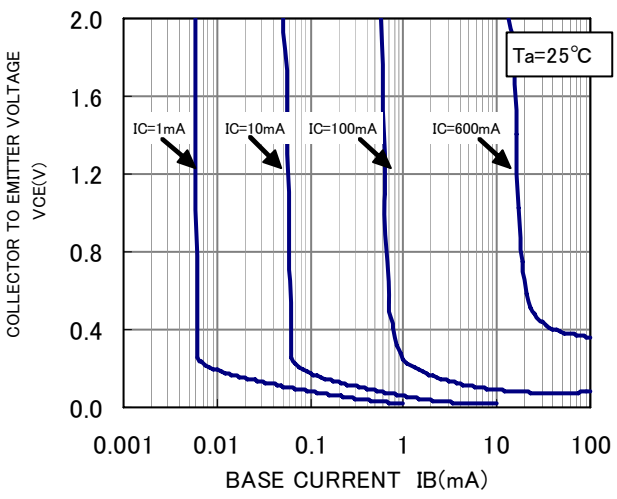
DC FORWARD CURRENT GAIN VS.
COLLECTOR CURRENT



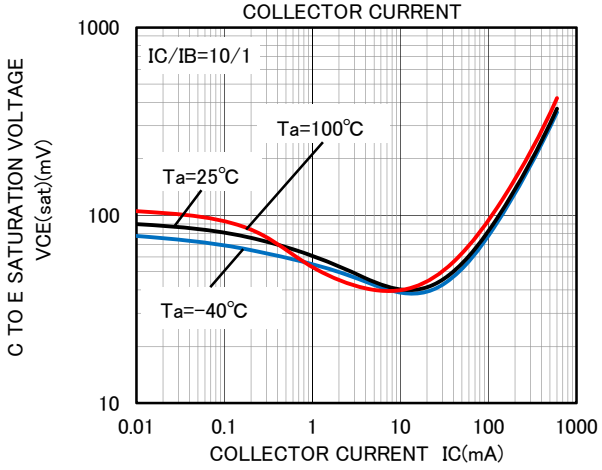
COMMON EMITTER OUTPUT



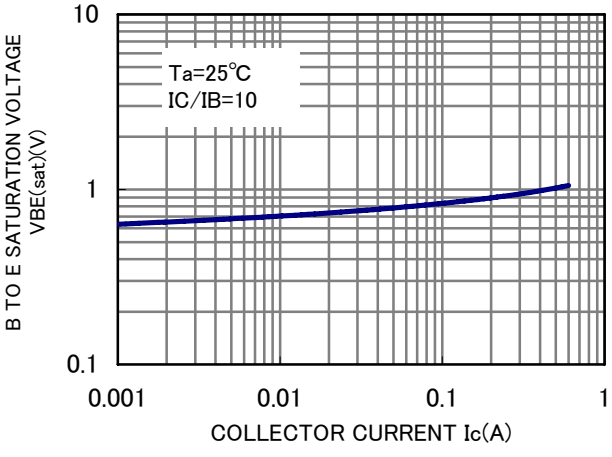
COLLECTOR TO EMITTER VOLTAGE VS.
BASE CURRENT



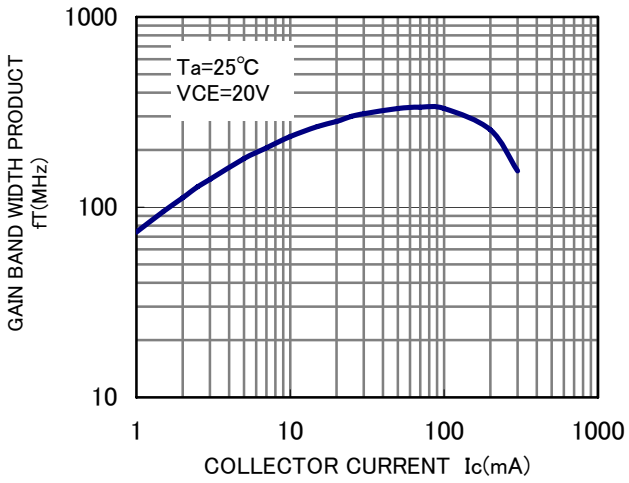
C TO E SATURATION VOLTAGE VS.
COLLECTOR CURRENT



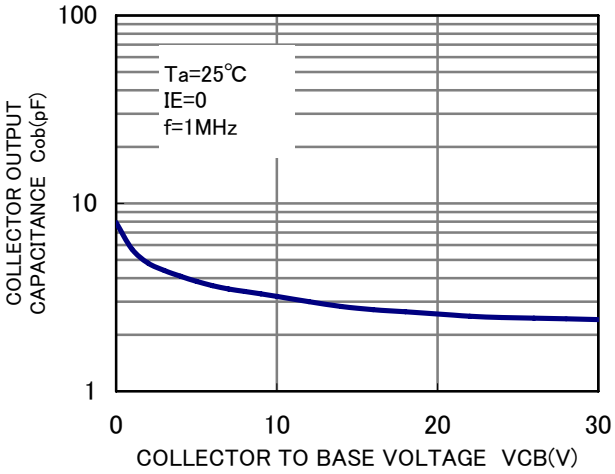
B TO E SATURATION VOLTAGE VS.
COLLECTOR CURRENT



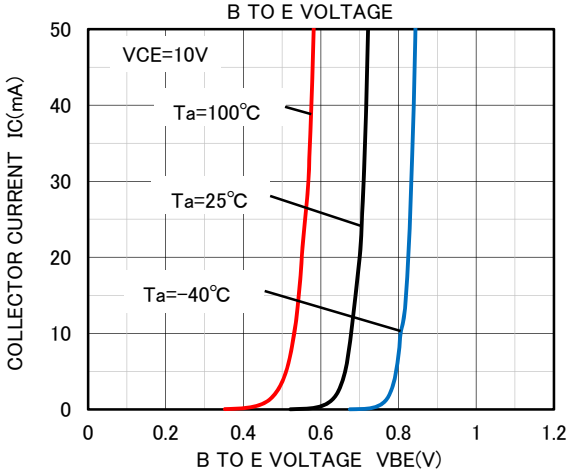
GAIN BAND WIDTH PRODUCT VS.
COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS.
COLLECTOR TO BASE VOLTAGE



COLLECTOR CURRENT VS.
B TO E VOLTAGE



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