PRELIMINARY

※This datasheet is possibility of change.
Because this device is developing now.

ISC6046AU1

FOR GENERAL PURPOSE HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

ISC6046AU1 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

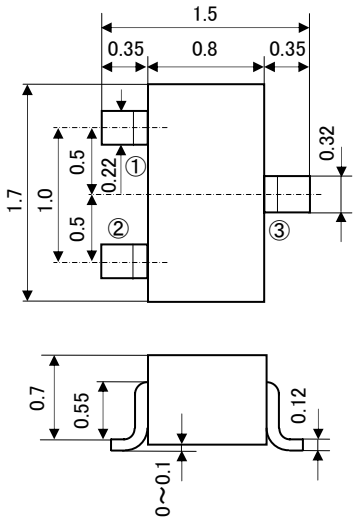
$V_{CE(sat)}$<0.3V_{max}(IC=150mA、IB=15mA)

APPLICATION

For switching application, small type motor drive application.

OUTLINE DRAWING

Unit:mm



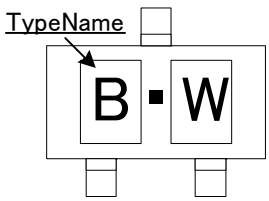
TERMINAL CONNECTOR

①:BASE　　JEITA:SC-75A

②:EMITTER　　JEDEC:—

③:COLLECTOR

MARKING



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	150	mW
T_j	Junction temperature	+150	℃
T_{stg}	Storage temperature	−55～+150	℃

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=10uA、I_E=0	75	—	—	V
$V_{(BR)EBO}$	E to B break down voltage	I_E=10uA、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

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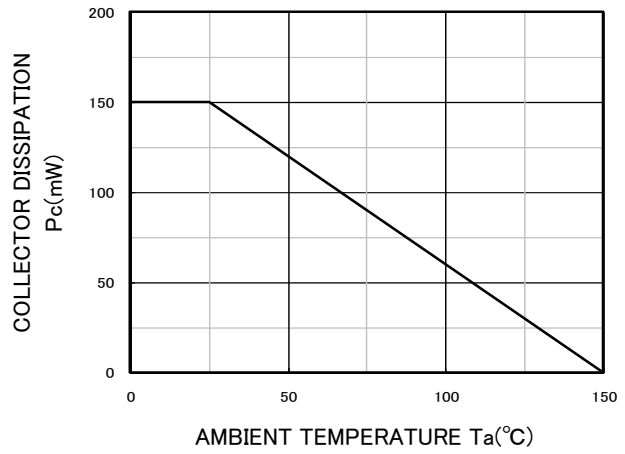
ISC6046AU1

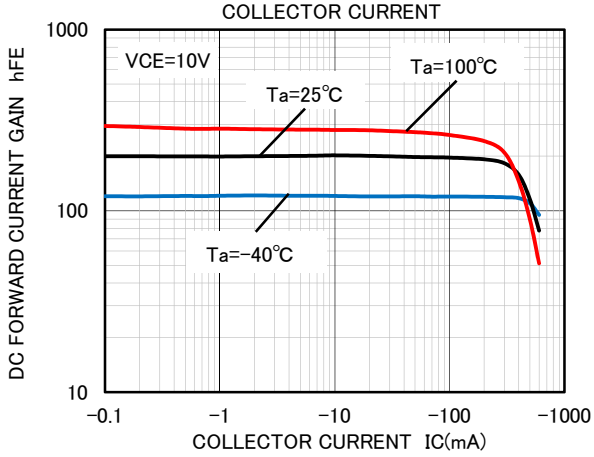
FOR GENERAL PURPOSE HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

TYPICAL CHARACTERISTICS

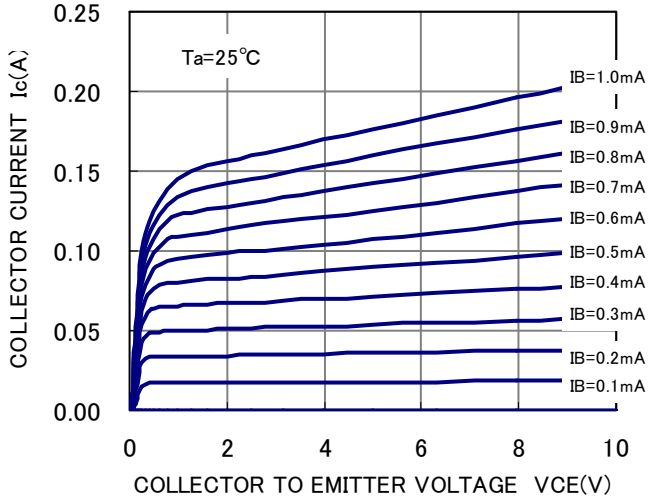
COLLECTOR DISSIPATION VS.
AMBIENT TEMPERATURE



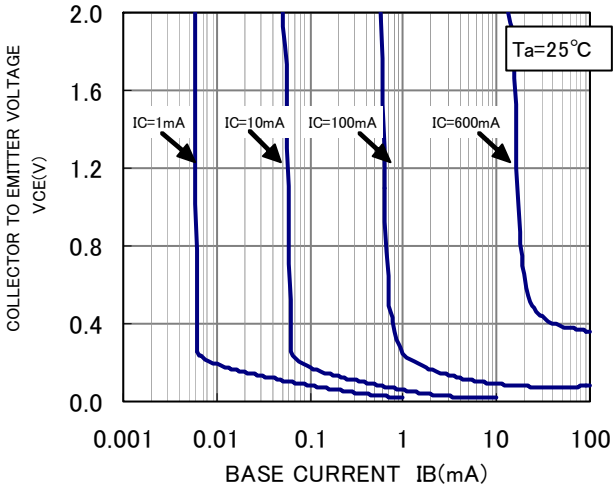
DC FORWARD CURRENT GAIN VS.
COLLECTOR CURRENT



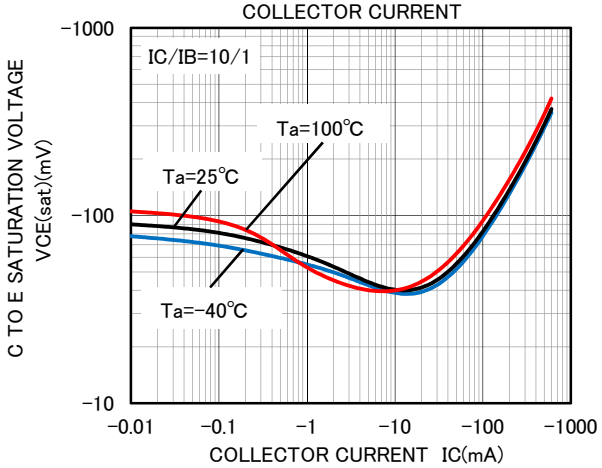
COMMON EMITTER OUTPUT



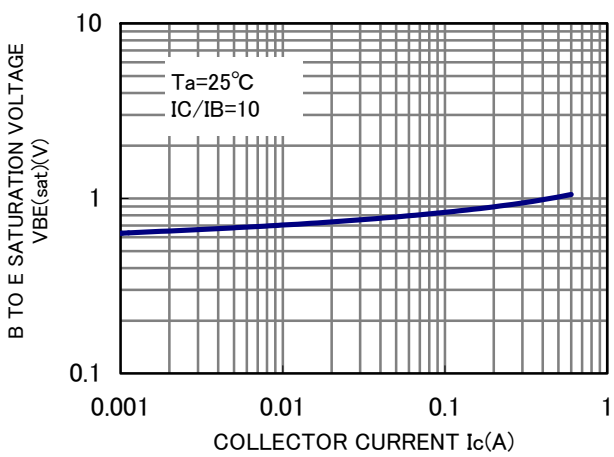
COLLECTOR TO EMITTER VOLTAGE VS.
BASE CURRENT



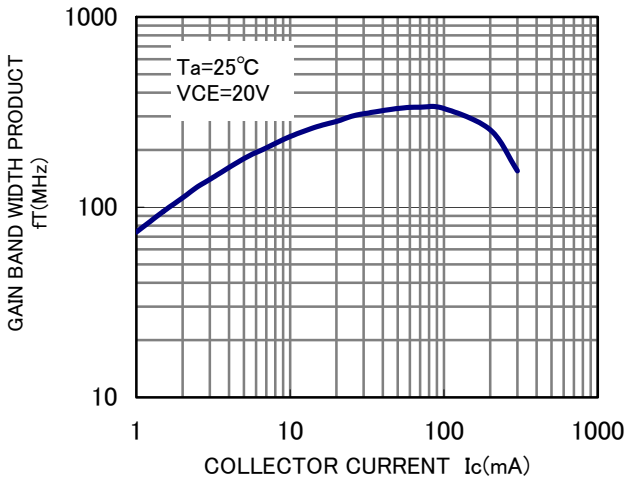
C TO E SATURATION VOLTAGE VS.
COLLECTOR CURRENT



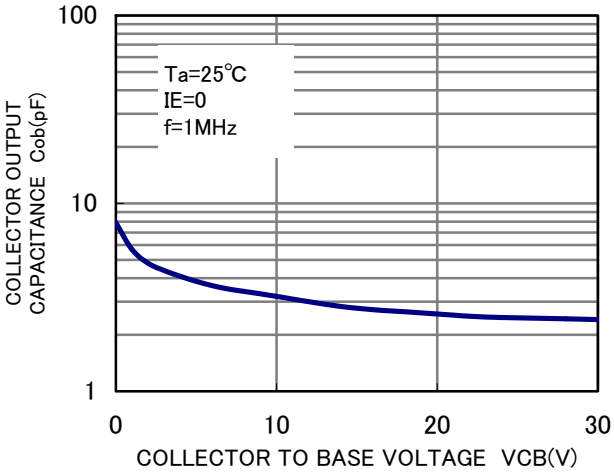
B TO E SATURATION VOLTAGE VS.
COLLECTOR CURRENT



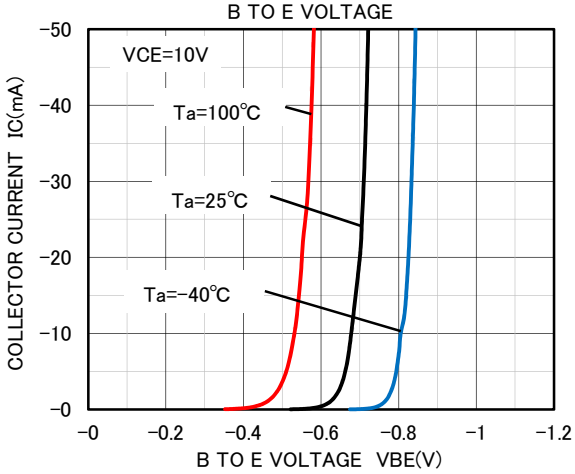
GAIN BAND WIDTH PRODUCT VS.
COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS.
COLLECTOR TO BASE VOLTAGE



COLLECTOR CURRENT VS.
B TO E VOLTAGE



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