ISC6053AM1

FOR GENERAL PURPOSE HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

ISC6053AM1 is a silicon NPN epitaxial type transistor
Designed with high collector current, low $V_{CE(sat)}$.

FEATURE

●High collector current

$I_{C(MAX)}$=650mA

●Low collector to emitter saturation voltage

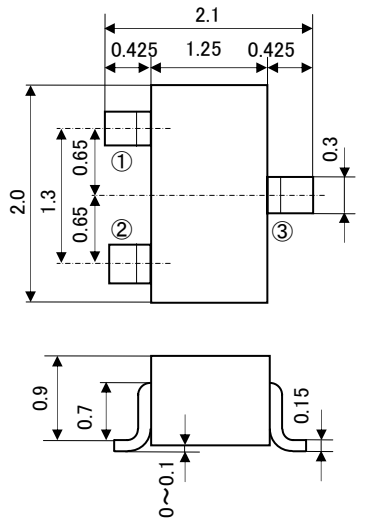
$V_{CE(sat)}$<0.5V_{max}

APPLICATION

For switching application, small type motor drive application.

OUTLINE DRAWING

Unit : mm



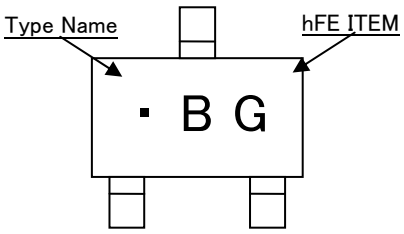
TERMINAL CONNECTOR
①:BASE
②:EMITTER
③:COLLECTOR

JEITA : SC-70
JEDEC : —

MAXIMUM RATINGS (Ta=25℃)

Symbol	Parameter	Ratings	Unit
V_{CEO}	Collector to Emitter voltage	20	V
V_{CBO}	Collector to Base voltage	25	V
V_{EBO}	Emitter to Base voltage	4	V
I_C	Collector current	650	mA
P_C	Collector dissipation	200	mW
T_j	Junction temperature	150	℃
T_{stg}	Storage temperature	−55～150	℃

MARKING



ELECTRICAL CHARACTERISTICS (Ta=25℃)

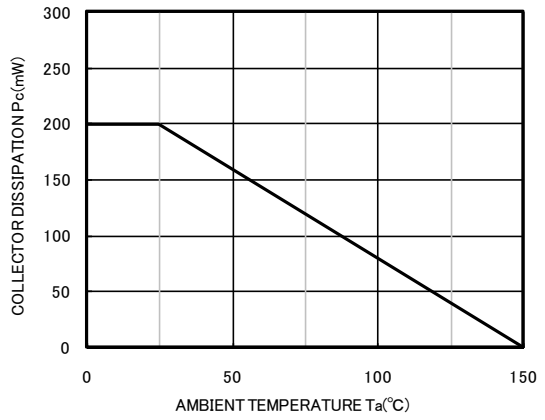
Symbol	Parameter	Test condition	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CEO}$	C to E break down voltage	IC=100uA, IB=0	20			V
$V_{(BR)CBO}$	C to B break down voltage	IC=10uA, IE=0	25			V
$V_{(BR)EBO}$	E to B break down voltage	IE=10uA, IC=0	4			V
I_{CBO}	Collector cut off current	VCB=25V, IE=0			1	uA
I_{EBO}	Emitter cut off current	VEB=2V, IC=0			1	uA
h_{FE}※	DC forward current gain	VCE=4V,IC=100mA	150		800	−
$V_{CE(sat)}$	C to E saturation voltage	IC=500mA, IB=25mA		0.3	0.5	V
f_T	Gain band width product	VCE=6V,IE=−10mA,		290		MHz

*:It shows hFE classification in below table.

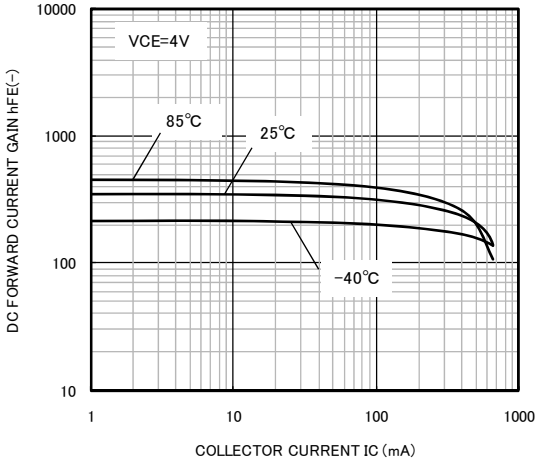
ITEM	E	F	G
hFE	150～300	250～500	400～800

TYPICAL CHARACTERISTICS

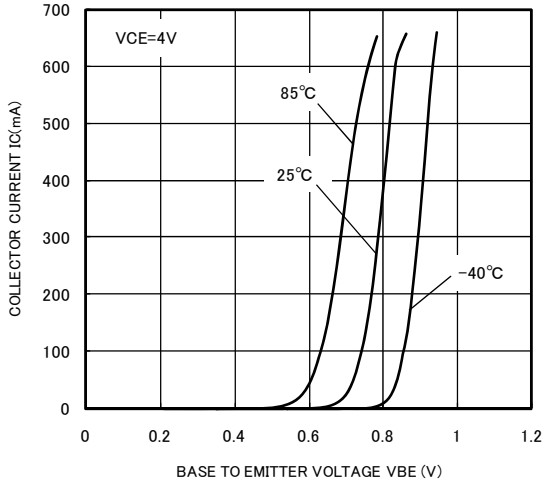
COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE



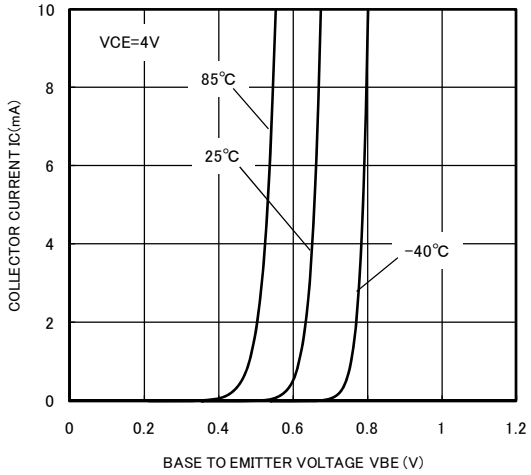
DC FORWARD CURRENT GAIN VS.
COLLECTOR CURRENT



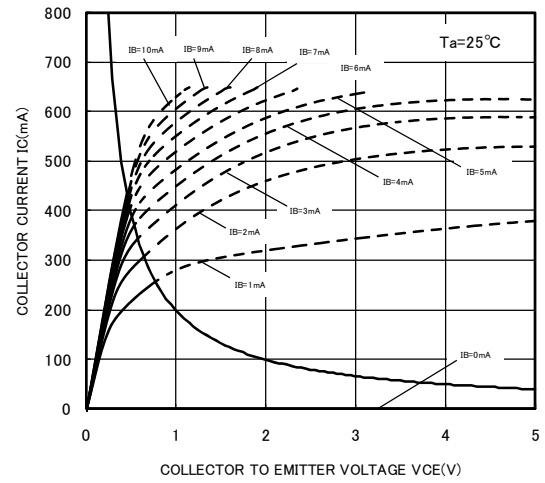
COMMON EMITTER TRANSFER(1)



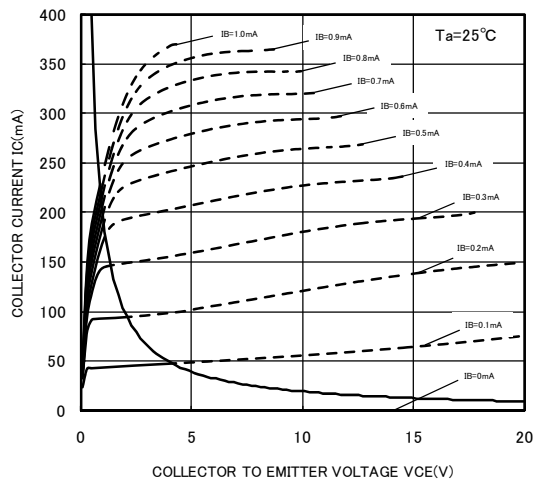
COMMON EMITTER TRANSFER(2)



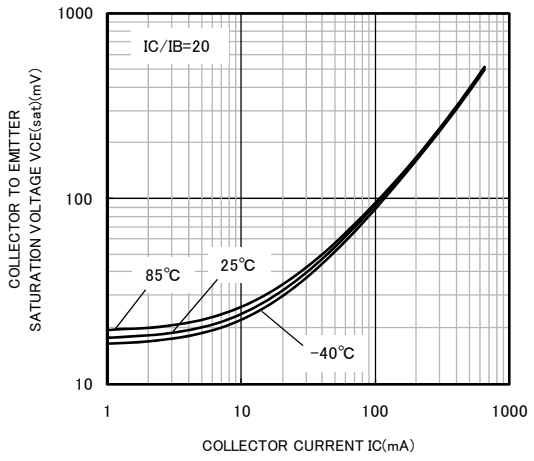
COMMON EMITTER OUTPUT(1)



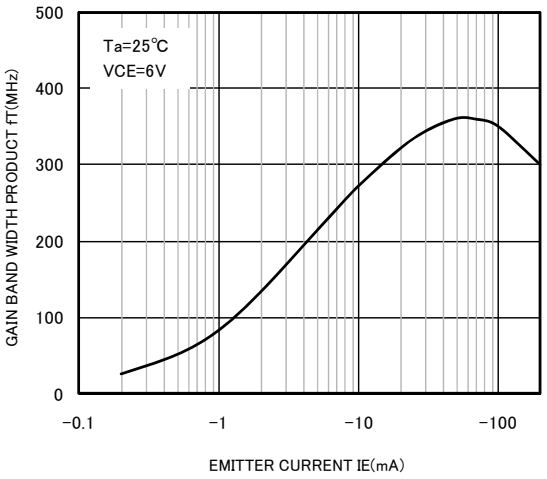
COMMON EMITTER OUTPUT(2)



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



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