〈SMALL-SIGNAL TRANSISTOR〉

ISC4356AS1

FOR HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

ISC4356AS1 is a silicon NPN epitaxial type transistor designed relay drive application.

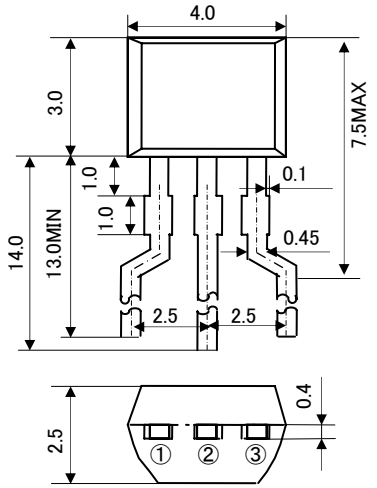
FEATURE

- ●High voltage. V_{CEo}=60V
- ●High collector current. I_C=2A
- ●Low V_{CE}(sat) V_{CE}(sat)=0.5V max (@I_C=1A, I_B=50mA)
- ●High collector dissipation. P_C=600mW

APPLICATION

Audio machine, VCR, relay drive.

OUTLINE DRAWING Unit:mm



JEITA:
JEDEC:

TERMINAL CONNECTER
①:EMITTER
②:COLLECTOR
③:BASE

MAXIMUM RATINGS(Ta=25℃)

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	60	V
V_{EBO}	Emitter to Base voltage	6	V
V_{CEO}	Collector to Emitter voltage	60	V
I_C	Collector current	2	A
I_{CM}	Peak collector current	3	A
P_c	Collector dissipation	600	mW
T_j	Junction temperature	+150	℃
T_{stg}	Storage temperature	−55～+150	℃

ELECTRICAL CHARACTERISTICS(Ta=25℃)

Parameter	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	I_C= 10μA , I_E =0mA	60	−	−	V
$V_{(BR)EBO}$	E to B break down voltage	I_E= 10μA , I_C =0mA	6	−	−	V
$V_{(BR)CEO}$	C to E break down voltage	I_C= 2mA , R_{BE}= ∞	60	−	−	V
ICBO	Collector cut off current	V_{CB}= 50V , I_E= 0mA	−	−	0.2	μA
IEBO	Emitter cut off current	V_{EB} = 4V , I_C= 0mA	−	−	0.2	μA
hFE※	DC forward current gain	V_{CE} = 4V , I_C= 100mA	55	−	300	−
VCE(sat)	C to E Saturation Voltage	I_C=1A , I_B= 50mA	−	0.2	0.5	V
fT	Gain band width product	V_{CE}= 10V , I_E= −10mA	−	80	−	MHz
Cob	Collector output capacitance	V_{CB}= 10V , I_E= 0mA,f=1MHz	−	18	−	pF

※) It shows hFE classification in right table.

Item	C	D	E
hFE item	55～110	90～180	150～300

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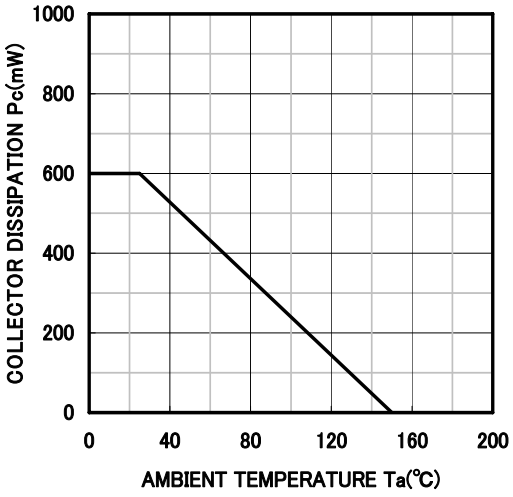
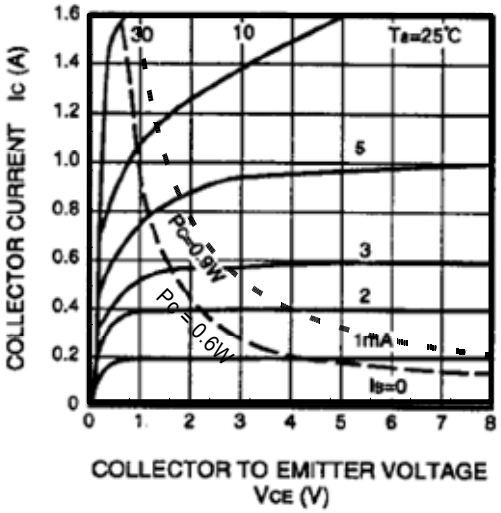
TYPICAL CHARACTERISTICS

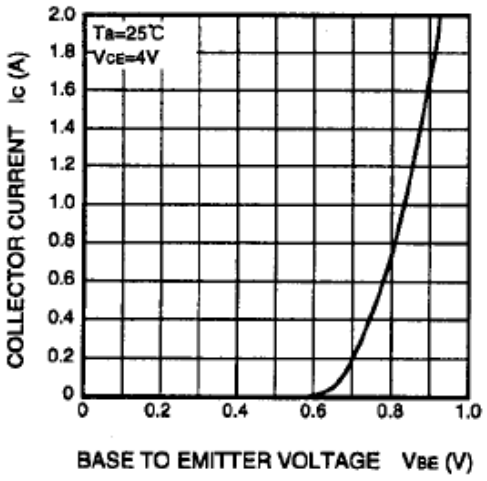
COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE



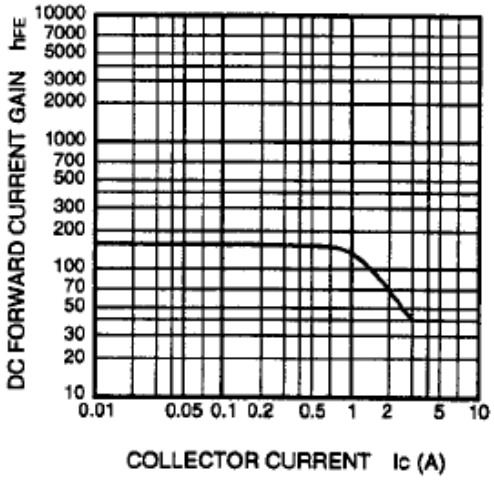
COMMON EMITTER OUTPUT



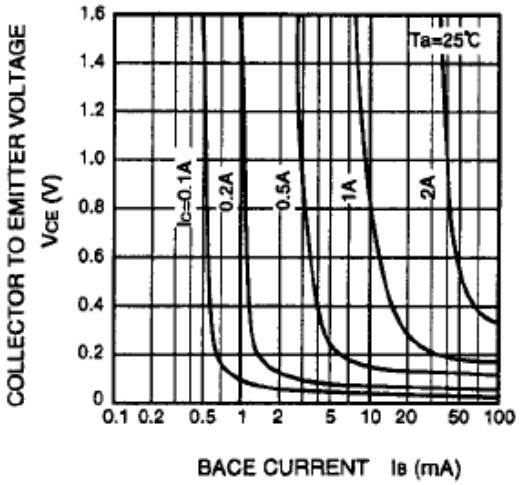
COMMON EMITTER TRANSFER



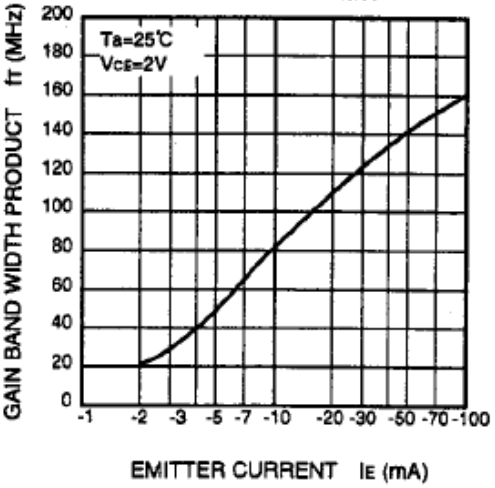
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT



GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



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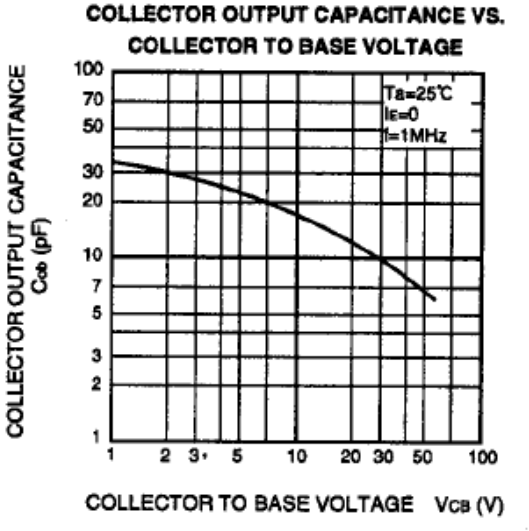

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