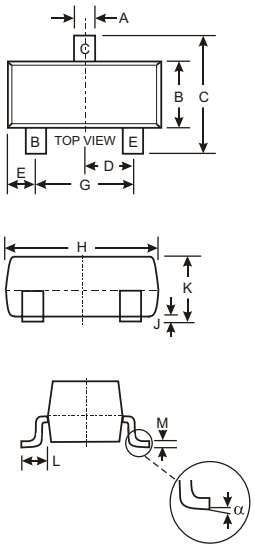
HAICHUANG SEMI

2SC3356

NPN SILICON EPITAXIAL PLANAR TRANSISTOR

Features

- Low Noise and High Gain.
- High Power Gain.
- Pb-Free Package is available.



SOT-23		
Dim	**Min**	**Max**
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
α	0°	8°
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	20	V
Collector Emitter Voltage	V_{CEO}	12	V
Emitter Base Voltage	V_{EBO}	3	V
Collector Current	I_C	100	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{Stg}	- 65 to + 150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

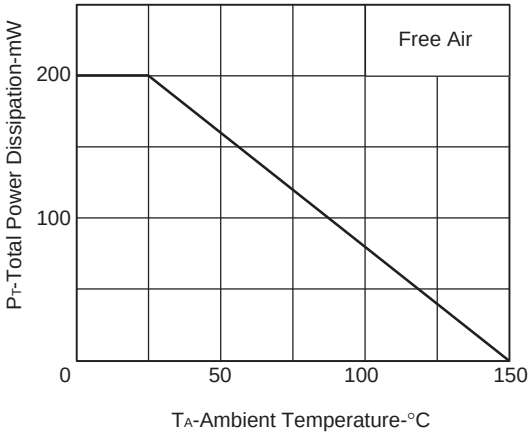
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector- base breakdown voltage	VCBO	Ic= 100 μA， IE= 0	20			V
Collector- emitter breakdown voltage	VCEO	Ic= 1 mA， IB= 0	12			
Emitter - base breakdown voltage	VEBO	IE= 100 uA， IC= 0	3			
Collector-base cut-off current	ICBO	VCB= 10 V , IE= 0			1	uA
Emitter cut-off current	IEBO	VEB= 1V , IC=0			1	
Collector-emitter saturation voltage	VCE(sat	IC=50 mA, IB=5mA			0.4	V
Base - emitter saturation voltage	VBE(sat)	IC=50 mA, IB=5mA			1.2	
DC current gain	hFE	VCE= 10V, IC= 20mA	50		400	
Insertion power gain	$\|S21e\|^2$	VCE = 10 V, IC = 20 mA, f= 1GHz		11.5		dB
Noise figure	NFre	VCE = 10 V, IC = 7 mA, f= 1GHz		1.1	2	
Reverse transfer capacitance	Cre	VCB= 10V, IE= 0,f=1MHz		0.55	1	pF
Transition frequency	fT	VCE= 10V, IC= 20mA		7		GHz

CLASSIFICATION OF h_{FE}

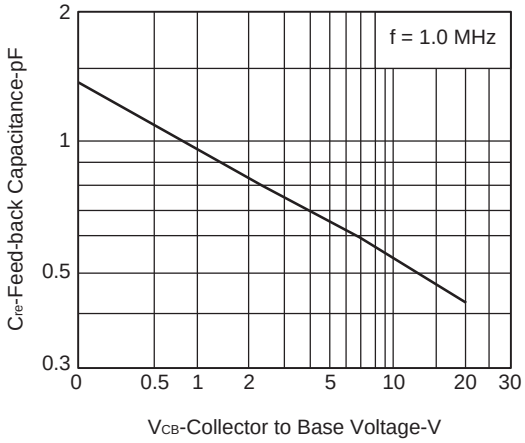
Rank	O	Q	R	S
Range	50 - 100	80 -160	125 - 250	250 - 400
Marking	R23	R24	R25	R26

TYPICAL TRANSIENT CHARACTERISTICS

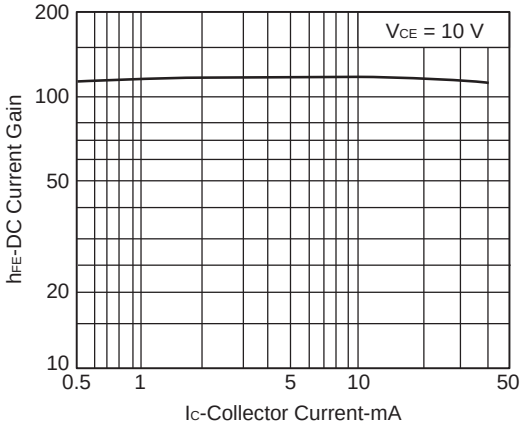
TOTAL POWER DISSIPATION vs.
AMBIENT TEMPERATURE



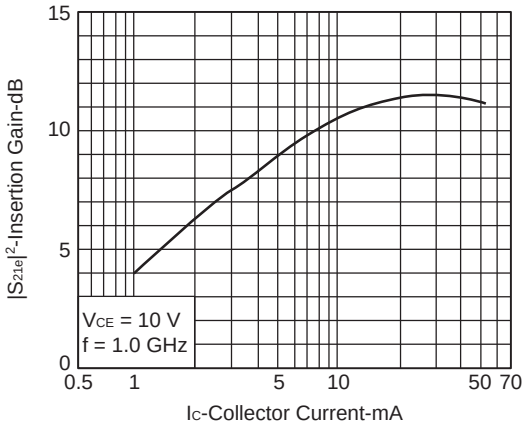
FEED-BACK CAPACITANCE vs.
COLLECTOR TO BASE VOLTAGE



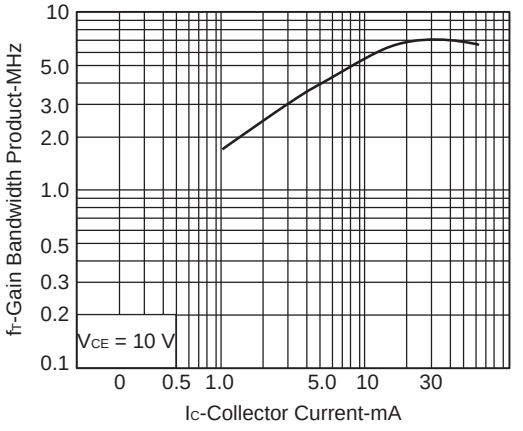
DC CURRENT GAIN vs.
COLLECTOR CURRENT



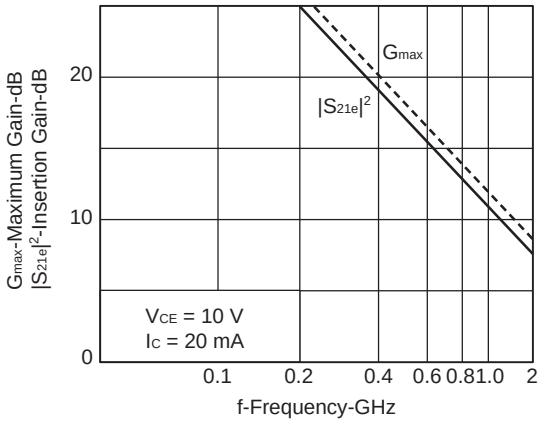
INSERTION GAIN vs.
COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs.
COLLECTOR CURRENT



INSERTION GAIN, MAXIMUM GAIN
vs. FREQUENCY



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