PRODUCT DATA SHEET

To learn more about JGSEMI, please visit our website at

Datasheet Resources Samples

Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.jg-semi.cn. Please email any questions regarding the system integration to JINGAO_questions@jgsemi.com.

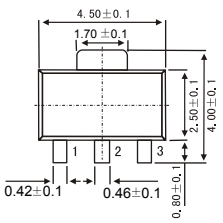
2SC3357

NPN Transistors

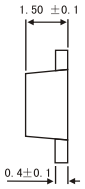
■ Features

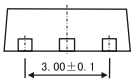
- Low noise and high gain
- High power gain
- Large P_{tot}

SOT-89



Unit:mm





1.Base
2.Collector
3.Emitter

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	20	V
Collector - Emitter Voltage	V_{CEO}	12	
Emitter - Base Voltage	V_{EBO}	3	
Collector Current - Continuous	I_C	100	mA
Collector Power Dissipation	P_C	1.2	W
Junction to Ambient Resistance	$R_{th\ (j-a)}$	62.5	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

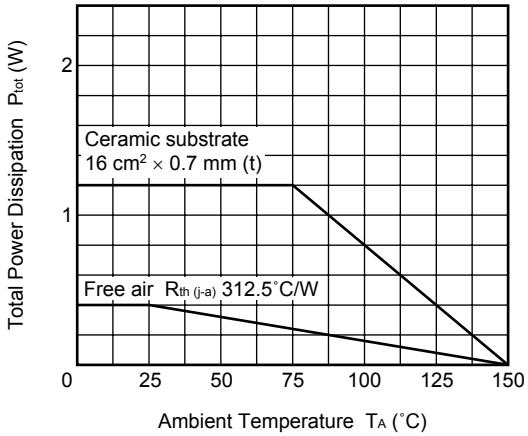
■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 100 μA, I_E= 0	20			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA, I_B= 0	12			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A, I_C= 0	3			
Collector-base cut-off current	I_{CBO}	V_{CB}= 20V , I_E= 0			1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= 3V , I_C=0			1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=50 mA, I_B=5mA			0.4	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=50 mA, I_B=5mA			1.2	
DC current gain (Note.1)	h_{FE}	V_{CE}= 10V, I_C= 20mA	50		250	
Insertion Power Gain	$\|S_{21e}\|^2$	V_{CE} = 10V, I_C = 20mA, f= 1GHz		9		dB
Noise Figure	NF	V_{CE} = 10V, I_C = 7mA, f= 1GHz		1.1		
		V_{CE} = 10V, I_C = 40mA, f= 1GHz		1.8	3	
Reverse Transfer Capacitance	C_{re}	V_{CB}= 10V, I_E= 0,f=1MHz			1	pF
Transition frequency	f_T	V_{CE}= 10V, I_C= 20mA		6.5		GHz

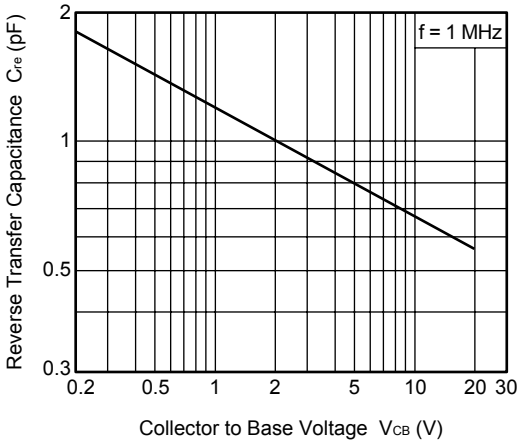
Note.1: Pulse measurement: PW ⩽ 350 us, Duty Cycle ⩽ 2%

■ Typical Characterisitics

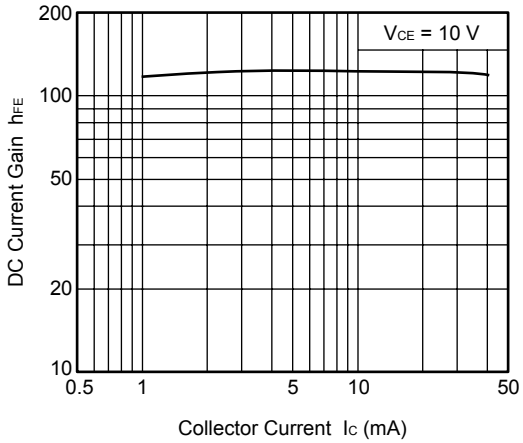
TOTAL POWER DISSIPATION
vs. AMBIENT TEMPERATURE



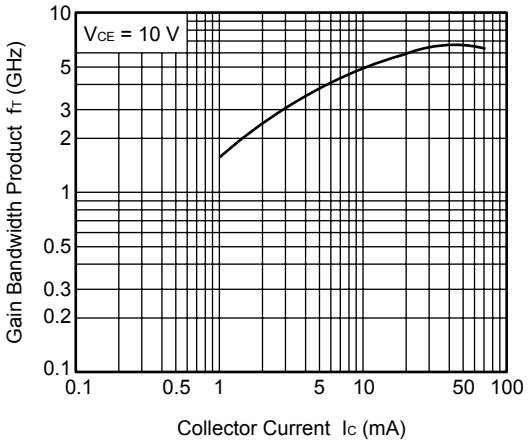
REVERSE TRANSFER CAPACITANCE
vs. COLLECTOR TO BASE VOLTAGE



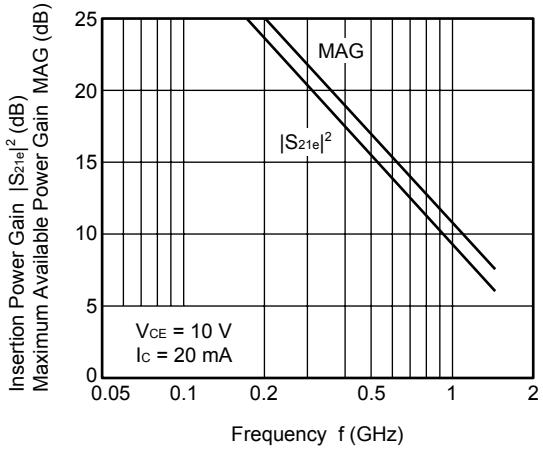
DC CURRENT GAIN vs.
COLLECTOR CURRENT



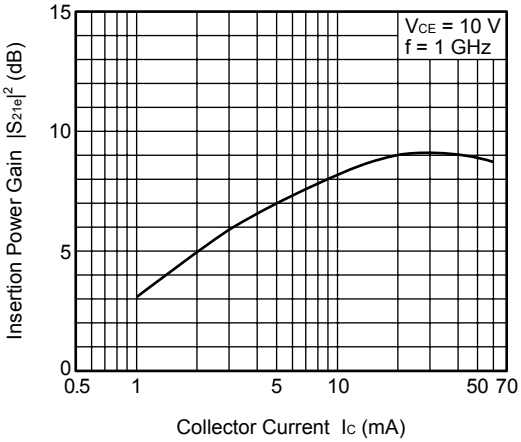
GAIN BANDWIDTH PRODUCT
vs. COLLECTOR CURRENT



INSERTION POWER GAIN, MAG
vs. FREQUENCY

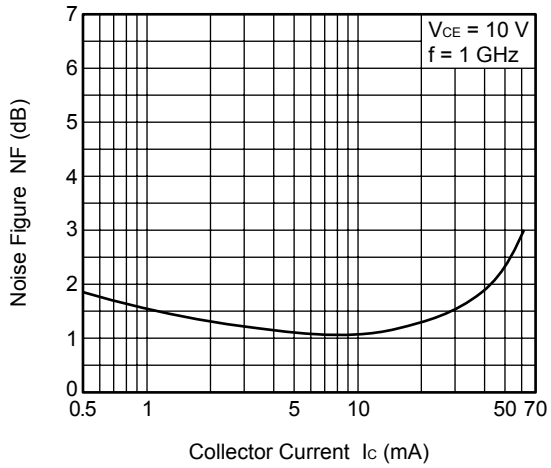


INSERTION POWER GAIN
vs. COLLECTOR CURRENT

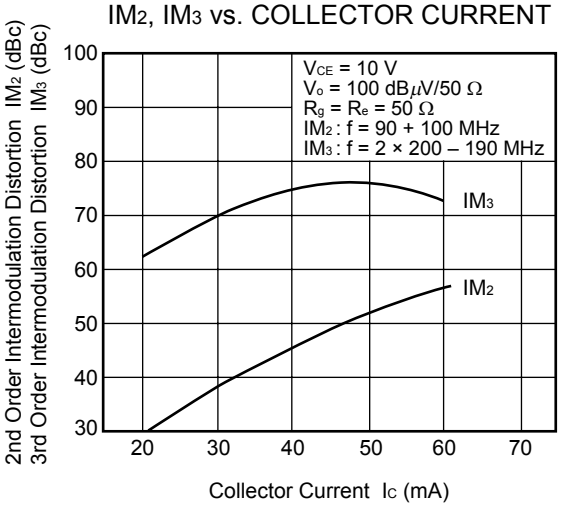


■ Typical Characterisitics

NOISE FIGURE vs.
COLLECTOR CURRENT



IM_2, IM_3 vs. COLLECTOR CURRENT



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