



SEMICONDUCTOR

S9018

Shandong Yiguang Electronic Joint stock Co., Ltd

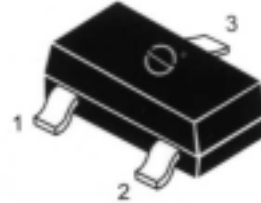
TECHNICAL DATA

NPN EPITAXIAL SILICON TRANSISTOR

**AM/FM IF AMPLIFIER, LOCAL OSCILLATOR
OF FM/VHF TUNER**

* High Current Gain Bandwidth Product $f_T=1100\text{MHz}$

Package: SOT-23



ABSOLUTE MAXIMUM RATINGS at Ta=25

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	Vcbo	30	V
Collector-Emitter Voltage	Vceo	15	V
Emitter-Base Voltage	Vebo	5	V
Collector Current	Ic	50	mA
Collector Dissipation Ta=25 *	P _D	225	mW
Junction Temperature	T _j	150	
Storage Temperature	T _{stg}	-55-150	

PIN:	1	2	3
STYLE			
NO.1	B	E	C

ELECTRICAL CHARACTERISTICS at Ta=25

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Base Breakdown Voltage	BVcbo	30			V	Ic=100uA Ie=0
Collector-Emitter Breakdown Voltage#	BVceo	15			V	Ic= 1mA Ib=0
Emitter-Base Breakdown Voltage	BVebo	5			V	Ie= 100uA Ic=0
Collector-Base Cutoff Current	Icbo			50	nA	Vcb= 12V Ie=0
DC Current Gain	Hfe	28	100	300		Vce= 5V Ic= 1mA
Collector-Emitter Saturation Voltage	Vce(sat)			0.5	V	Ic= 10mA Ib= 1mA
Collector-Base Capacitance	Cob		1.3	1.7	PF	Vcb=10V Ie=0 f=1MHZ
Current Gain-Bandwidth Product	f _T	700	1100		MHz	Vce= 5V Ic= 5mA

* Total Device Dissipation : FR=1x0.75x0.062in Board, Derate 25 .

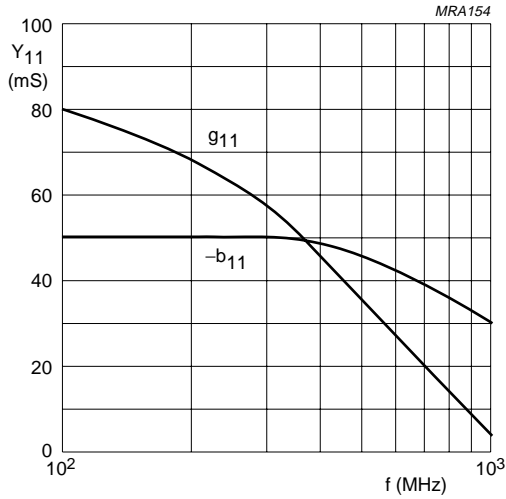
Pulse Test : Pulse Width 300uS, Duty cycle 2%

DEVICE MARKING:

S9018LT1=J8

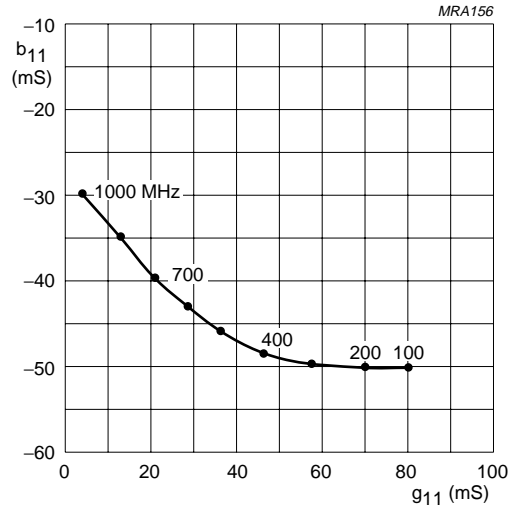


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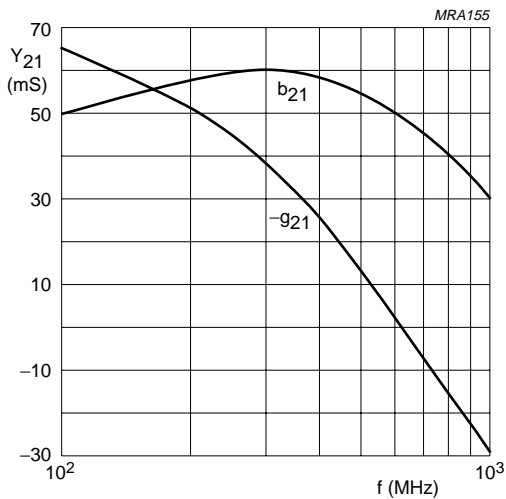
V_{CB} = 10 V; I_C = 4 mA.

Fig.2 Common base input admittance (Y₁₁) as a function of frequency.



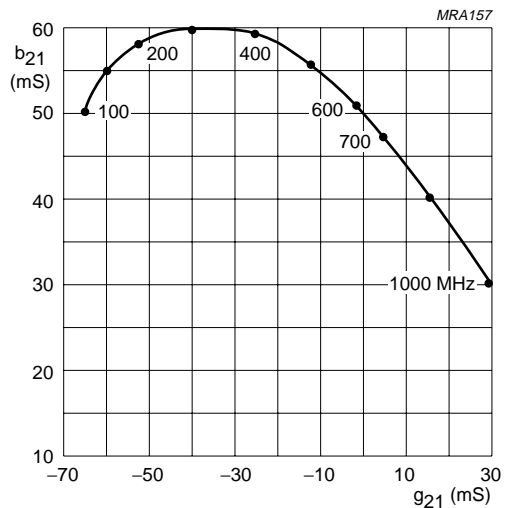
V_{CB} = 10 V; I_C = 4 mA.

Fig.3 Common base input admittance (Y₁₁).



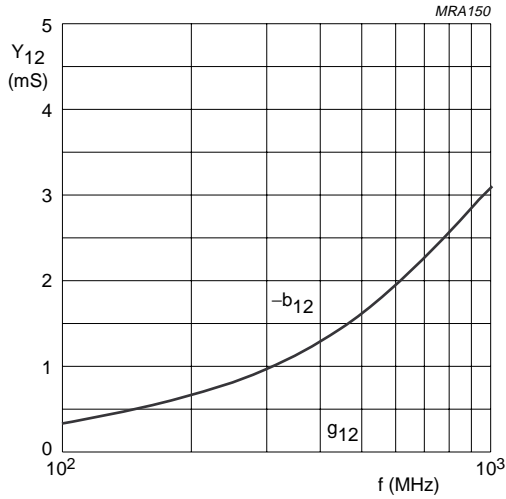
V_{CB} = 10 V; I_C = 4 mA.

Fig.4 Common base forward transfer admittance (Y₂₁) as a function of frequency.



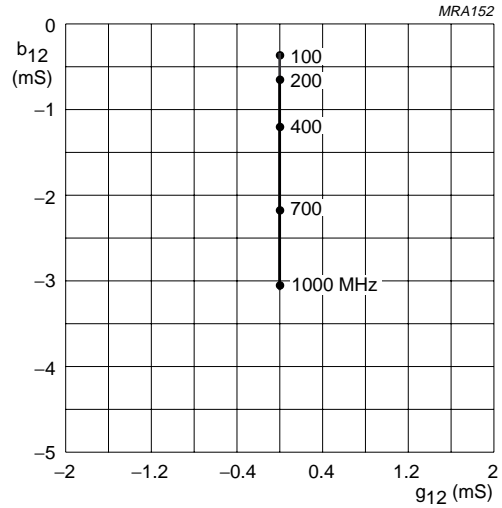
V_{CB} = 10 V; I_C = 4 mA.

Fig.5 Common base forward transfer admittance (Y₂₁).



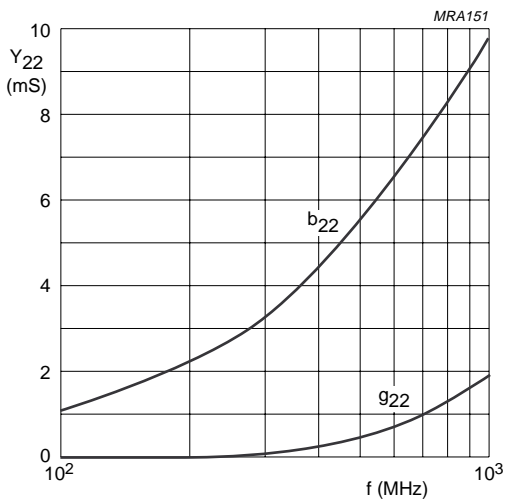
$V_{CB} = 10\text{ V}; I_C = 4\text{ mA}$.

Fig.6 Common base reverse transfer admittance (Y_{12}) as a function of frequency.



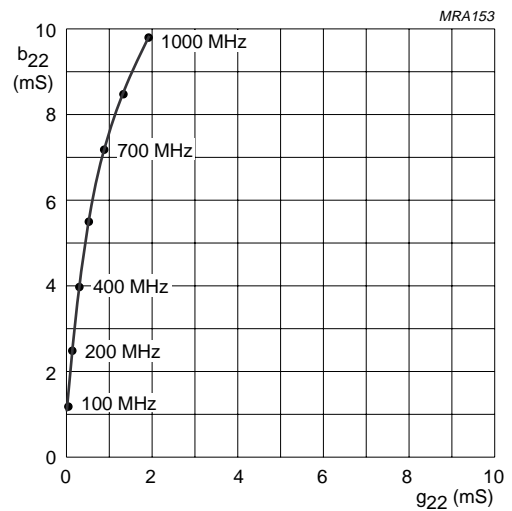
$V_{CB} = 10\text{ V}; I_C = 4\text{ mA}$.

Fig.7 Common base reverse transfer admittance (Y_{12}).



$V_{CB} = 10\text{ V}; I_C = 4\text{ mA}$.

Fig.8 Common base reverse admittance (Y_{22}) as a function of frequency.



$V_{CB} = 10\text{ V}; I_C = 4\text{ mA}$.

Fig.9 Common base reverse admittance (Y_{22}).