



SEMI CONDUCTOR

S9015LT1

Shandong Yiguang Electronic Joint stock Co., Ltd

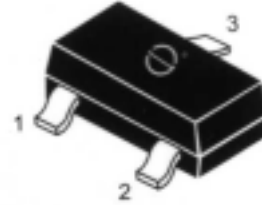
TECHNICAL DATA

PNP EPITAXIAL SILICON TRANSISTOR

**LOW FREQUENCY,LOW NOISE AMPLIFIER**

- \* Complement to S9014LT1
- \* Collector Current:  $I_c = -100\text{mA}$
- \* Collector-Emitter Voltage:  $V_{ce} = -45\text{V}$

Package:SOT-23



**ABSOLUTE MAXIMUM RATINGS at  $T_a = 25$**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{cbo}$	-50	V
Collector-Emitter Voltage	$V_{ceo}$	-45	V
Emitter-Base Voltage	$V_{ebo}$	-5	V
Collector Current	$I_c$	-100	mA
Collector Dissipation $T_a = 25$ *	$P_D$	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  $T_a = 25$**

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Base Breakdown Voltage	$BV_{cbo}$	-50			V	$I_c = -100\mu\text{A}$ $I_e = 0$
Collector-Emitter Breakdown Voltage#	$BV_{ceo}$	-45			V	$I_c = -1\text{mA}$ $I_b = 0$
Emitter-Base Breakdown Voltage	$BV_{ebo}$	-5			V	$I_e = -100\mu\text{A}$ $I_c = 0$
Collector-Base Cutoff Current	$I_{cbo}$			-50	nA	$V_{cb} = -50\text{V}$ $I_e = 0$
Emitter-Base Cutoff Current	$I_{ebo}$			-50	nA	$V_{eb} = -5\text{V}$ $I_c = 0$
DC Current Gain	$H_{fe}$	60	200	600		$V_{ce} = -5\text{V}$ $I_c = -1\text{mA}$
Collector-Emitter Saturation Voltage	$V_{ce(sat)}$		-0.20	-0.7	V	$I_c = -100\text{mA}$ $I_b = -5\text{mA}$
Base-Emitter Saturation Voltage	$V_{be(sat)}$		-0.82	-1.00	V	$I_c = -100\text{mA}$ $I_b = -5\text{mA}$
Base-Emitter on Voltage	$V_{be(on)}$	-0.6	-0.67	-0.75	V	$V_{ce} = -5\text{V}$ $I_c = -2\text{mA}$
Output Capacitance	$C_{ob}$		4.5	7	PF	$V_{cb} = -10\text{V}$ $I_e = 0$ $f = 1\text{MHz}$
Current Gain-Bandwidth Product	$f_T$	100	190		MHz	$V_{ce} = -5\text{V}$ $I_c = -10\text{mA}$
Noise Figure	NF		0.7	10	dB	$V_{ce} = -5\text{V}$ $I_c = -0.2\text{mA}$ $F = 1\text{KHz}$ $R_s = 1\text{Kohm}$

\* Total Device Dissipation :  $FR = 1 \times 0.75 \times 0.062\text{in Board}$ , Derate 25 .

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

DEVICE MARKING:

S9015LT1=M6



Fig. 1  $P_C$ - $T_a$

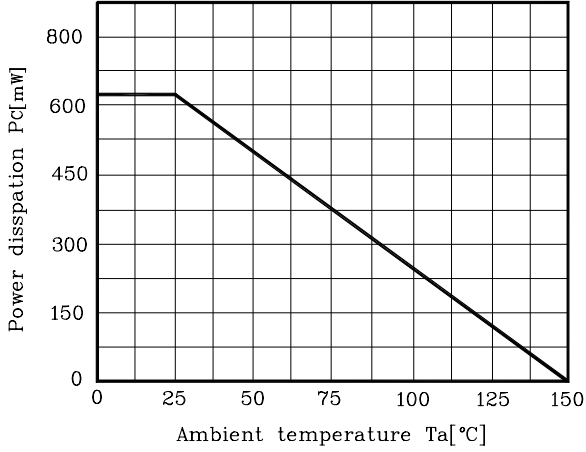


Fig. 2  $I_C$ - $V_{BE}$

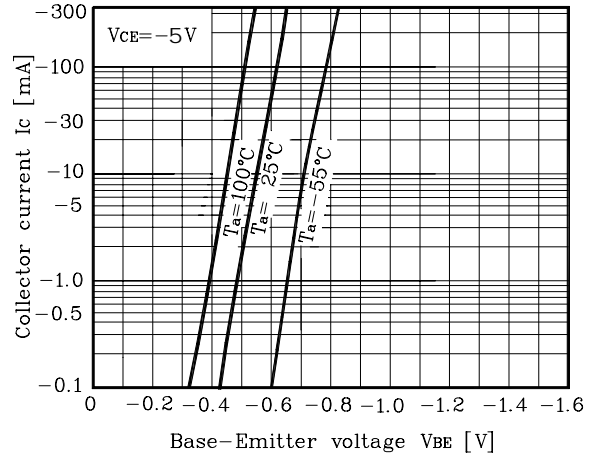


Fig. 3  $I_C$ - $V_{CE}$

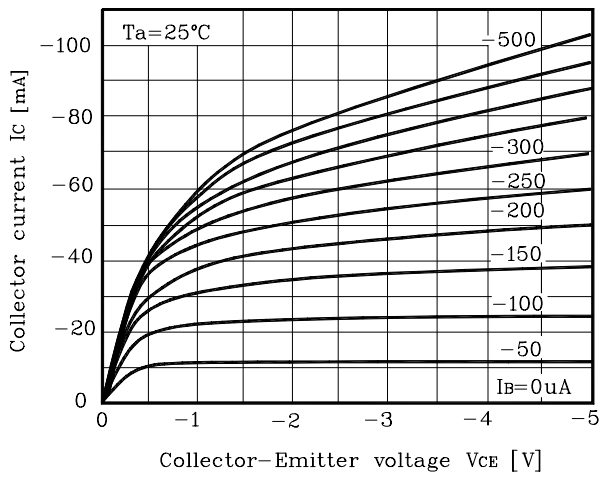


Fig. 4  $h_{FE}$ - $I_C$

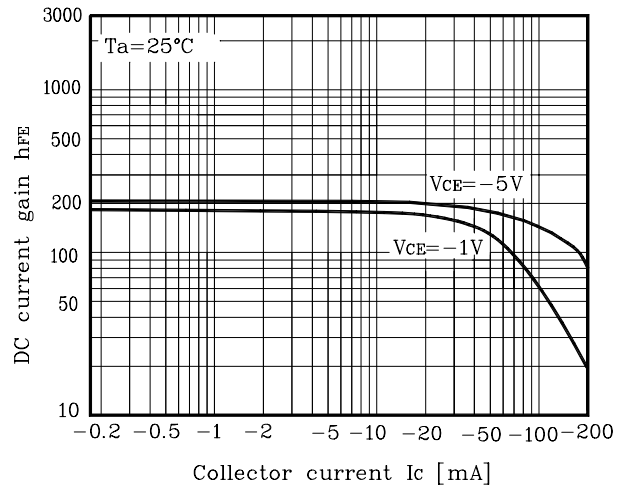


Fig. 5  $V_{CE(sat)}$ - $I_C$

