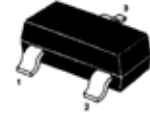


**FUKUCOM COMPANY LTD.****福 靈 有 限 公 司**FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,  
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

**S9014LT1****NPN Epitaxial Silicon Transistor**  
**Pre-amplifier, Low Level & Low Noise**

- Complement to S9015LT1
- Collector Current: 100mA
- Collector-Emitter Voltage:  $V_{CE}=45V$
- High Total Power Dissipation:  $P_c=225mW$
- High  $H_{FE}$  and Good Linearity

1. Base 2. Emitter 3. Collector  
SOT-23 Plastic Package**Absolute Maximum Ratings**  $T_a=25^{\circ}C$  unless otherwise noted

Symbol	Characteristic	Value	Units
$V_{CBO}$	Collector-Base Voltage	50	V
$V_{CEO}$	Collector-Emitter Voltage	45	V
$V_{EB}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	100	mA
$P_D$	Collector Dissipation $T_a=25^{\circ}C^*$	225	mW
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{STG}$	Storage Temperature	-55~150	$^{\circ}C$

**Electrical Characteristics**  $T_a=25^{\circ}C$  unless otherwise noted

Symbol	Characteristic	Test Condition	Min.	Typ.	Max.	Units
$V_{CBO}$	Collector-Base Breakdown Voltage	$I_C=100 \mu A, I_E=0$	50			V
$V_{CEO}$	Collector-Emitter Breakdown Voltage <sup>#</sup>	$I_C=1mA, I_B=0$	45			V
$V_{EBO}$	Emitter-Base Breakdown Voltage	$I_E=100 \mu A, I_C=0$	5			V
$I_{CBO}$	Collector-Base Cutoff Current	$V_{CB}=50V, I_E=0V$			50	$\eta A$
$I_{EBO}$	Emitter-Base Cutoff Current	$V_{EB}=5V, I_C=0$			50	$\eta A$
$h_{FE}$	DC Current Gain Group C Group D	$V_{CE}=5V, I_C=1mA$	200 400		600 1000	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=100mA, I_B=5mA$			0.3	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=100mA, I_B=5mA$			1.0	V
$V_{BE(ON)}$	Base-Emitter On Voltage	$V_{CE}=5V; I_C=2mA$	0.58	0.63	0.7	V
$C_{OB}$	Output Capacitance	$V_{CB}=10V; I_E=0$ $f=1MHz$		2.2	3.5	pF
$f_T$	Current Gain-Bandwidth Product	$V_{CE}=5V; I_C=10mA$	150	270		MHz
NF	Noise Figure	$V_{CE}=5V; I_C=0.2mA;$ $f=1KHz; R_S=2Kohm$			10	dB

Marking : L6(Group)

\* Total Device Dissipation : FR=1x0.75x0.062 in Board, Derate  $25^{\circ}C$ # Pulse Test : Pulse Width  $\leq 300\mu S$ , Duty cycle  $\leq 2\%$



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## S9014LT1

Fig. 1  $P_C$  -  $T_a$

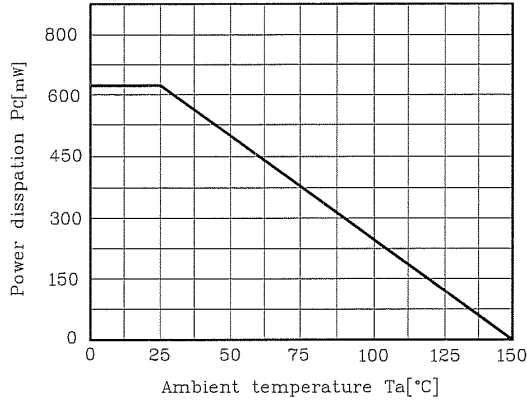


Fig. 2  $I_C$  -  $V_{BE}$

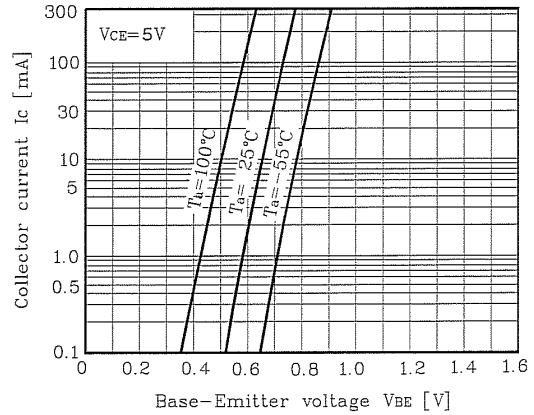


Fig. 3  $I_C$  -  $V_{CE}$

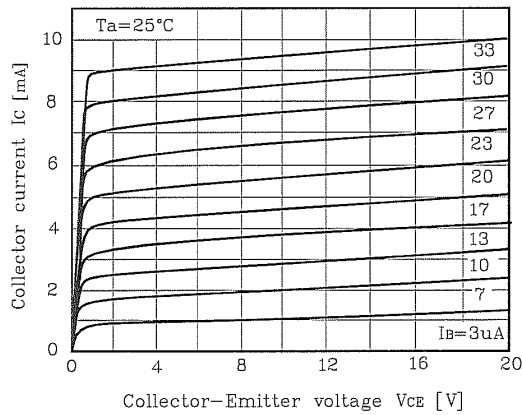


Fig. 4  $h_{FE}$  -  $I_C$

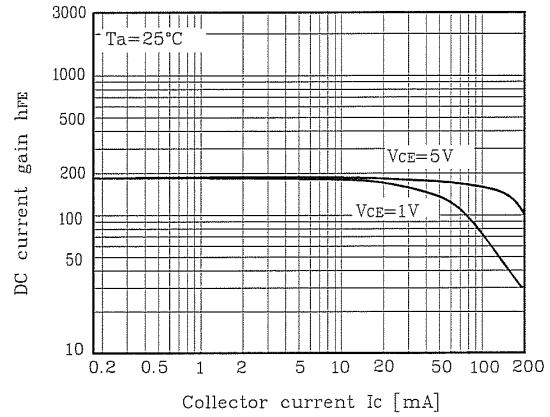


Fig. 5  $V_{CE(sat)}$  -  $I_C$

