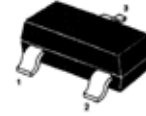


**FUKUCOM COMPANY LTD.****福 靈 有 限 公 司**FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,  
KWUN TONG, KOWLOON, HONG KONG.

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

**S9013LT1****NPN Epitaxial Silicon Transistor**

- Complement to S9012LT1
- Collector Current:  $I_C=500\text{mA}$
- High Total Power Dissipation:  $P_C=225\text{mW}$

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

Symbol	Characteristic	Value	Units
$V_{CBO}$	Collector-Base Voltage	40	V
$V_{CEO}$	Collector-Emitter Voltage	20	V
$V_{EB}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	500	mA
$P_D$	Collector Dissipation $T_a=25^\circ\text{C}^*$	225	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55~150	$^\circ\text{C}$

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

Symbol	Characteristic	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C=100\ \mu\text{A}, I_E=0$	40			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage <sup>#</sup>	$I_C=1\text{mA}, I_B=0$	20			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E=100\ \mu\text{A}, I_C=0$	5			V
$I_{CBO}$	Collector-Base Cutoff Current	$V_{CB}=25\text{V}, I_E=0\text{V}$			100	$\eta\ \text{A}$
$I_{EBO}$	Emitter-Base Cutoff Current	$V_{EB}=3\text{V}, I_C=0$			100	$\eta\ \text{A}$
$h_{FE}$	DC Current Gain	$V_{CE}=1\text{V}, I_C=50\text{mA}$				
	Group G		110		183	
	Group H		177		250	
	Group I		250		380	
$h_{FE}$	DC Current Gain	$V_{CE}=1\text{V}, I_C=500\text{mA}$	40			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=500\text{mA}, I_B=50\text{mA}$		0.16	0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=500\text{mA}, I_B=50\text{mA}$		0.91	1.2	V
$V_{BE(ON)}$	Base-Emitter On Voltage	$V_{CE}=1\text{V}; I_C=10\text{mA}$	0.6	0.67	0.7	V

Marking : K6(Group)

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



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