

# General Purpose Transistors

## NPN Silicon

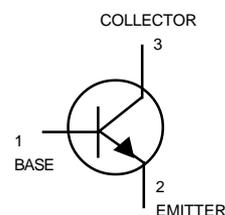
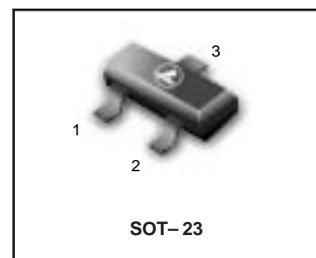
### FEATURE

- Complementary to L9015.
- Pb-Free package is available.

### DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
L9014QLT1	14Q	3000/Tape&Reel
L9014QLT1G (Pb-Free)	14Q	3000/Tape&Reel
L9014RLT11	14R	3000/Tape&Reel
L9014RLT1G (Pb-Free)	14R	3000/Tape&Reel
L9014SLT1	14S	3000/Tape&Reel
L9014SLT1G (Pb-Free)	14S	3000/Tape&Reel
L9014TLT11	14T	3000/Tape&Reel
L9014TLT1G (Pb-Free)	14T	3000/Tape&Reel

## L9014\*LT1



### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CEO}$	45	V
Collector-Base Voltage	$V_{CBO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector current-continuoun	$I_C$	100	mA

### THERMAL CHARATEERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, (1) $T_A=25^{\circ}\text{C}$	$P_D$	225	mW
Derate above $25^{\circ}\text{C}$		1.8	mW/ $^{\circ}\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^{\circ}\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate, (2) $T_A=25^{\circ}\text{C}$	$P_D$	300	mW
Derate above $25^{\circ}\text{C}$		2.4	mW/ $^{\circ}\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^{\circ}\text{C}/\text{W}$
Junction and Storage Temperature	$T_J, T_{stg}$	-55 to +150	$^{\circ}\text{C}$

**L9014\*LT1**

**ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)**

**OFF CHARACTERISTICS**

Characteristic	Symbol	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage ( $I_C=1.0\text{mA}$ )	$V(BR)_{CEO}$	45	-	-	V
Emitter-Base Breakdown Voltage ( $I_E=100\ \mu\text{A}$ )	$V(BR)_{EBO}$	5	-	-	V
Collector-Base Breakdown Voltage ( $I_C=100\ \mu\text{A}$ )	$V(BR)_{CBO}$	50	-	-	V
Collector Cutoff Current ( $V_{CB}=40\text{V}$ )	$I_{CBO}$	-	-	100	nA
Emitter Cutoff Current ( $V_{EB}=3\text{V}$ )	$I_{EBO}$	-	-	100	nA

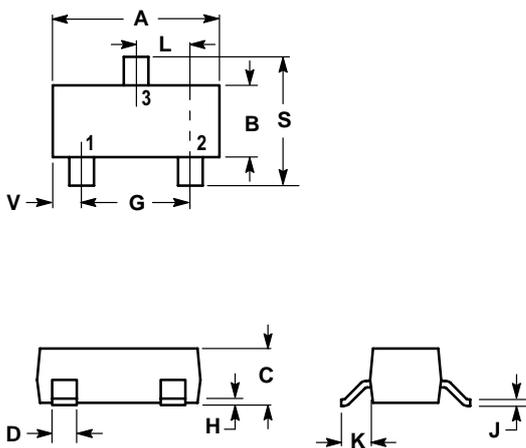
**ON CHARACTERISTICS**

DC Current Gain ( $I_C=1\text{mA}, V_{CE}=5\text{V}$ )	$H_{FE}$	150	-	1000	
Collector-Emitter Saturation Voltage ( $I_C=100\text{mA}, I_B=5\text{mA}$ )	$V_{CE}$	-	-	0.3	V

NOTE:	*	Q	R	S	T
	$H_{FE}$	150~300	200~400	300~600	400~1000

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SOT-23



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

- PIN 1. BASE  
 2. EMITTER  
 3. COLLECTOR

