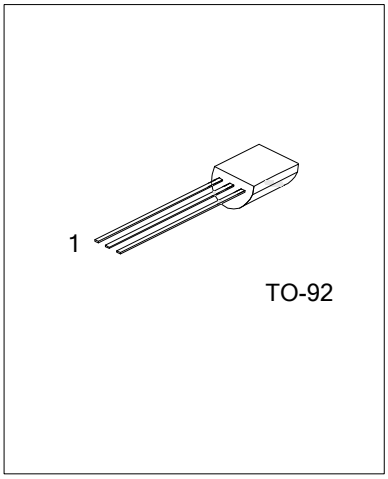
9014

NPN SILICON TRANSISTOR

PRE-AMPLIFIER, LOW LEVEL & LOW NOISE



■ FEATURES

* High total power dissipation. (450mW)
* Excellent h_{FE} linearity.
* Complementary to UTC **9015**

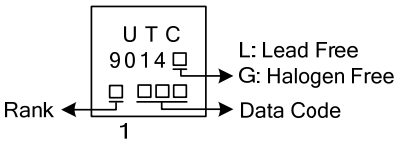
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
9014L-x-T92-B	9014G-x-T92-B	TO-92	E	B	C	Tape Box
9014L-x-T92-K	9014G-x-T92-K	TO-92	E	B	C	Bulk

Note: Pin assignment: E: Emitter B: Base C: Collector

9014L- x -T92- B (1)Packing Type (2)Package Type (3)Rank (4)Lead Free	(1) B: Tape Box, K: Bulk (2) T92: TO-92 (3) x: refer to Classification of h_{FE} (4) L: Lead Free, G: Halogen Free

■ MARKING INFORMATION

PACKAGE	MARKING
TO-92	

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	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	P_C	450	mW
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=100μA, I_E=0	50			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=1mA, I_B=0	45			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=100μA, I_C=0	5			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=50V, I_E=0			50	nA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=5V, I_C=0			100	nA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=1mA	60	280	1000	
Collector-Emitter saturation voltage	$V_{CE(SAT)}$	I_C=100mA, I_B=5mA		0.14	0.3	V
Base-Emitter saturation voltage	$V_{BE(SAT)}$	I_C=100mA, I_B=5mA		0.84	1.0	V
Base-Emitter on voltage	$V_{BE(ON)}$	V_{CE}=5V, I_C=2mA	0.58	0.63	0.7	V
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		2.2	3.5	pF
Current Gain-Bandwidth Porduct	f_T	V_{CE}=5V, I_C=10mA	150	270		MHz
Noise Figure	NF	V_{CE}=5V, I_C=0.2mA f=1KHz, R_S=2KΩ		0.9	10	dB

■ CLASSIFICATION OF h_{FE}

RANK	A	B	C	D
RANGE	60-150	100-300	200-600	400-1000

■ TYPICAL CHARACTERISTICS