



## 9015

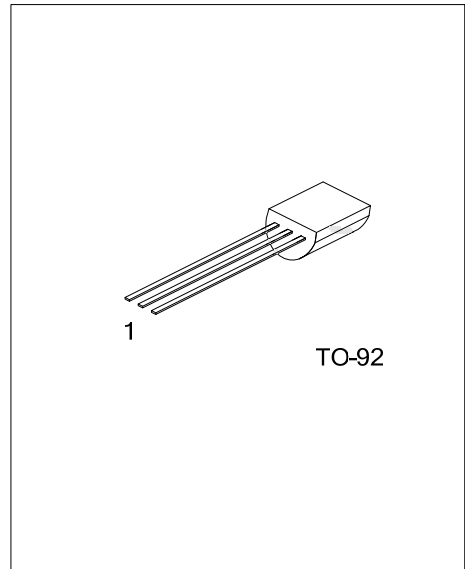
Preliminary

**PNP EPITAXIAL SILICON TRANSISTOR**

### PRE-AMPLIFIER, LOW LEVEL & LOW NOISE

#### ■ FEATURES

- \* High total power dissipation. (450mW)
- \* Excellent hFE linearity.
- \* Complementary to UTC 9014



#### ■ ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
9015L-x-T92-B	9015G-x-T92-B	TO-92	Tape Box
9015L-x-T92-K	9015G-x-T92-K	TO-92	Bulk
9015L-x-T92-T	9015G-x-T92-T	TO-92	Tape Reel

<p>9015L-x-T92-B</p>	<p>(1)Packing Type (2)Package Type (3)Rank (4)Halogen Free</p>	<p>(1) B: Tape Box, T: Tape Reel (2) T92: TO-92 (3) x: refer to Classification of hFE (4) G:Halogen Free, L: Lead Free</p>
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■ ABSOLUTE MAXIMUM RATINGS ( Ta=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 ( Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = -100\mu A, I_E = 0$	-50			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = -1mA, I_B = 0$	-45			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = -100\mu A, I_C = 0$	-5			V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -5mA$		-0.2	-0.7	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -100mA, I_B = -5mA$		-0.82	-1.0	V
Base-Emitter On Voltage	$V_{BE(on)}$	$V_{CE} = -5V, I_C = -2mA$	-0.6	-0.65	-0.75	V
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = -50V, I_E = 0$			-50	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$			-100	nA
DC Current Gain	$h_{FE}$	$V_{CE} = -5V, I_C = -1mA$	60	200	600	
Output Capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$		4.5	7.0	pF
Current Gain-Bandwidth Product	$f_T$	$V_{CE} = -5V, I_C = -10mA$	100	190		MHz
Noise Figure	NF	$V_{CE} = -5V, I_C = -0.2mA$ $f = 1KHz, R_s = 1K\Omega$		0.7	10	dB

■ CLASSIFICATION OF  $h_{FE}$

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

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