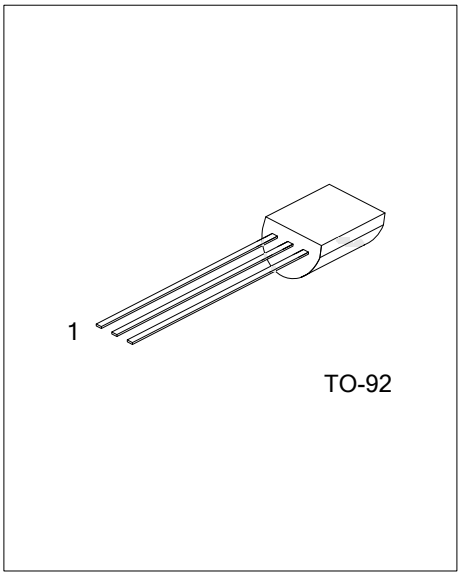
PROGRAMMABLE UNIJUNCTION TRANSISTOR



■ DESCRIPTION

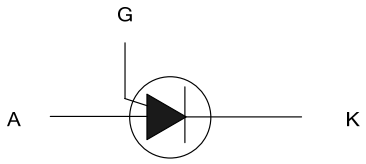
The UTC **2N6116** is a programmable unijunction transistor, it uses UTC's advanced technology to provide customers with low on-state voltage and high peak output voltage, etc.

The UTC **2N6116** is suitable for thyristor-trigger, pulse, oscillator and timing circuits, etc.

■ FEATURES

* High peak output voltage
* Low on-state voltage
* Low offset voltage
* Low gate to anode leakage current

■ SYMBOL



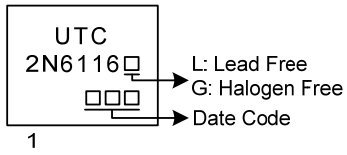
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2N6116L-T92-B	2N6116G-T92-B	TO-92	A	G	K	Tape Box
2N6116L-T92-K	2N6116G-T92-K	TO-92	A	G	K	Bulk

Note: Pin Assignment: A: Anode G: Gate K: Cathode

2N6116G-T92-B (1)Packing Type (2)Package Type (3)Green Package	(1) B: Tape Box, K: Bulk (2) T92: TO-92 (3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS

PARAMETER		SYMBOL	RATINGS	UNIT
Repetitive Peak Forward Current	100μs Pulse Width, 1% Duty Cycle	I_{TRM}	1	A
	20μs Pulse Width, 1% Duty Cycle		2	A
Non-Repetitive Peak Forward Current	10μs Pulse Width	I_{TSM}	5	A
DC Forward Anode Current		I_T	200	mA
Derate Above 25°C			2	mA/°C
DC Gate Current		I_G	±20	mA
Gate to Cathode Forward Voltage		V_{GKF}	40	V
Gate to Cathode Reverse Voltage		V_{GKR}	5	V
Gate to Anode Reverse Voltage		V_{GAR}	40	V
Anode to Cathode Voltage		V_{AK}	±40	V
Forward Power Dissipation	T_A=25°C	P_F	250	mW
Derate Above 25°C		$1/\theta_{JA}$	2.5	mW/°C
Operating Junction Temperature		T_J	-65 ~ +125	°C
Storage Junction Temperature		T_{STG}	-65 ~ +200	°C

Notes: 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
Offset Voltage	V_T	V_S=10V, R_G=1MΩ	0.2	0.70	1.6	V
		V_S=10V, R_G=10kΩ	0.2	0.35	0.6	V
Gate to Anode Leakage Current	I_{GAO}	V_S=40V, T_A=25°C, Cathode Open		1	5	nA
		V_S=40V, T_A=75°C, Cathode Open		30	75	nA
Gate to Cathode Leakage Current	I_{GKS}	V_S=40V, Anode to Cathode Shorted		5	50	nA
Peak Current	I_P	V_S=10V, R_G=1MΩ		1.25	2	μA
		V_S=10V, R_G=10kΩ		4	5	μA
Valley Current	I_V	V_S=10V, R_G=1MΩ		18	50	μA
		V_S=10V, R_G=10kΩ	70	270		μA
Forward Voltage	V_F	I_F=50mA Peak		0.8	1.5	V
Peak Output Voltage	V_O	V_B=20V, C_C=0.2μF	6	16		V
Pulse Voltage Rise Time	t_R	V_B=20V, C_C=0.2μF		40	80	ns