

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N6027
2N6028

SILICON PROGRAMMABLE
UNIUNCTION TRANSISTOR

JEDEC TO-92 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N6027, 2N6028 types are Silicon Programmable Unijunction Transistors, manufactured in an epoxy molded package, designed for adjustable (programmable) characteristics such as, Valley Current (I_V), Peak Current (I_P), and Intrinsic Standoff Ratio (η).

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

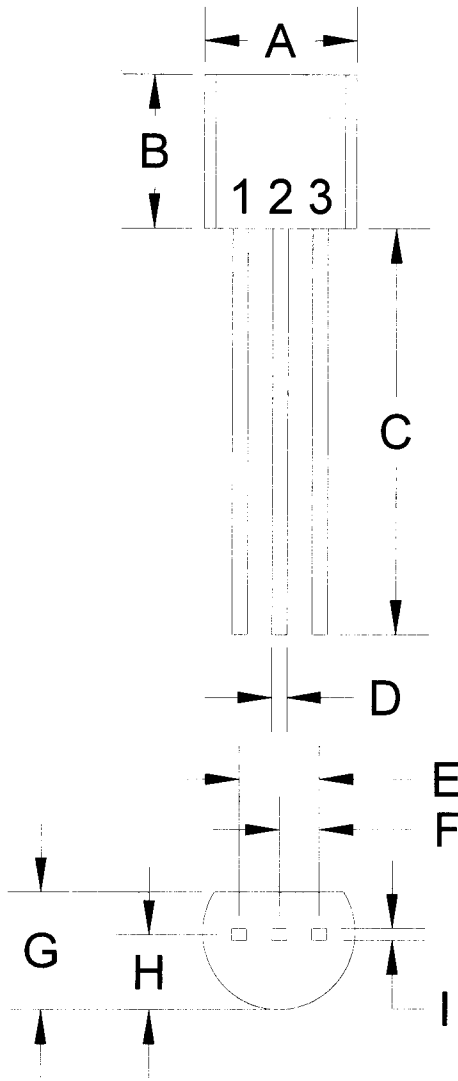
	SYMBOL		UNITS
Gate-Cathode Forward Voltage	V_{GKF}	40	V
Gate-Cathode Reverse Voltage	V_{GKR}	5.0	V
Gate-Anode Reverse Voltage	V_{GAR}	40	V
Anode-Cathode Voltage	V_{AK}	40	V
Peak Non-Repetitive Forward Current ($t=10\mu\text{s}$)	I_{TSM}	5.0	A
Peak Repetitive Forward Current ($t=20\mu\text{s}$, D.C.=1.0%)	I_{TRM}	2.0	A
Peak Repetitive Forward Current ($t=100\mu\text{s}$, D.C.=1.0%)	I_{TRM}	1.0	A
DC Forward Anode Current	I_T	150	mA
DC Gate Current	I_G	50	mA
Power Dissipation	P_D	300	mW
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$
Operating Junction Temperature	T_J	-50 to +100	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N6027		2N6028		UNITS
		MIN	MAX	MIN	MAX	
I_{GAO}	$V_S=40\text{V}$		10		10	nA
I_{GKS}	$V_S=40\text{V}$		50		50	nA
I_P	$V_S=10\text{V}$, $R_G=1.0\text{M}\Omega$		2.0		0.15	μA
I_P	$V_S=10\text{V}$, $R_G=10\text{k}\Omega$		5.0		1.0	μA
I_V	$V_S=10\text{V}$, $R_G=1.0\text{M}\Omega$		50		25	μA
I_V	$V_S=10\text{V}$, $R_G=10\text{k}\Omega$	70		25		μA
I_V	$V_S=10\text{V}$, $R_G=200\Omega$	1.5		1.0		mA
V_T	$V_S=10\text{V}$, $R_G=1.0\text{M}\Omega$	0.2	1.6	0.2	0.6	V
V_T	$V_S=10\text{V}$, $R_G=10\text{k}\Omega$	0.2	0.6	0.2	0.6	V
V_F	$I_F=50\text{mA}$		1.5		1.5	V
V_O	$V_B=20\text{V}$, $C_C=0.2\mu\text{F}$	6.0		6.0		V
t_r	$V_B=20\text{V}$, $C_C=0.2\mu\text{F}$		80		80	ns

(SEE REVERSE SIDE)

JEDEC TO-92 CASE - MECHANICAL OUTLINE



DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

R1

Lead Code:

- 1. Anode
- 2. Gate
- 3. Cathode