2N6027
2N6028

SILICON
PROGRAMMABLE
UNIJUNCTION TRANSISTORS

TO-92 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N6027 and 2N6028 devices 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).

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°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=10μs)	I_{TSM}	5.0	A
Peak Repetitive Forward Current (t=20μs, D.C.=1.0%)	I_{TRM}	2.0	A
Peak Repetitive Forward Current (t=100μs, 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
Operating Junction Temperature	T_J	-50 to +100	°C
Storage Temperature	T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

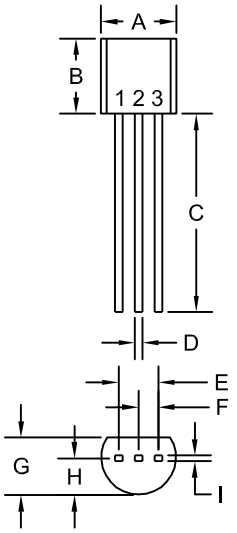
		2N6027		**2N6028**		
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**MIN**	**MAX**	**UNITS**
I_{GAO}	V_S=40V	-	10	-	10	nA
I_{GKS}	V_S=40V	-	50	-	50	nA
I_P	V_S=10V, R_G=1.0MΩ	-	2.0	-	0.15	μA
I_P	V_S=10V, R_G=10kΩ	-	5.0	-	1.0	μA
I_V	V_S=10V, R_G=1.0MΩ	-	50	-	25	μA
I_V	V_S=10V, R_G=10kΩ	70	-	25	-	μA
I_V	V_S=10V, R_G=200Ω	1.5	-	1.0	-	mA
V_T	V_S=10V, R_G=1.0MΩ	0.2	1.6	0.2	0.6	V
V_T	V_S=10V, R_G=10kΩ	0.2	0.6	0.2	0.6	V
V_F	I_F=50mA	-	1.5	-	1.5	V
V_O	V_B=20V, C_C=0.2μF	6.0	-	6.0	-	V
t_r	V_B=20V, C_C=0.2μF	-	80	-	80	ns

R2 (4-February 2014)

2N6027
2N6028

SILICON
PROGRAMMABLE
UNIJUNCTION TRANSISTORS

TO-92 CASE - MECHANICAL OUTLINE



R1

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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)

LEAD CODE:
1) Anode
2) Gate
3) Cathode

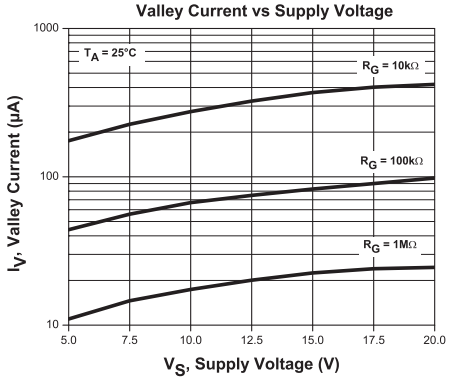
MARKING:
FULL PART NUMBER

2N6027
2N6028

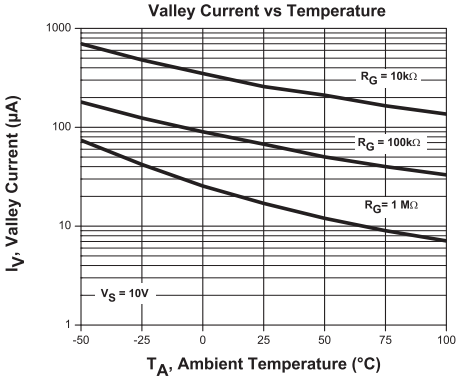
SILICON
PROGRAMMABLE
UNIJUNCTION TRANSISTORS

TYPICAL ELECTRICAL CHARACTERISTICS

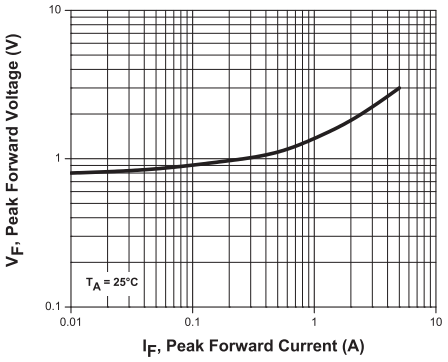
Valley Current vs Supply Voltage



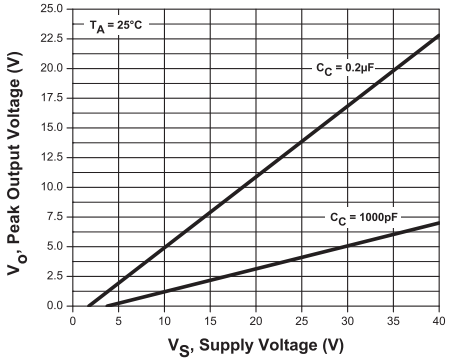
Valley Current vs Temperature



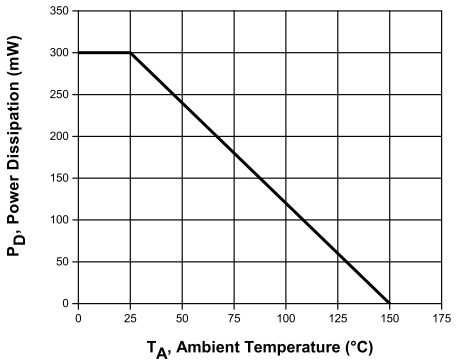
Forward Voltage



Peak Output Voltage



Power Derating



R2 (4-February 2014)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centralsemi.com

Worldwide Field Representatives:
www.centralsemi.com/wwreps

Worldwide Distributors:
www.centralsemi.com/wwdistributors

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centralsemi.com/terms