New Jersey Semi-Conductor Products, Inc.

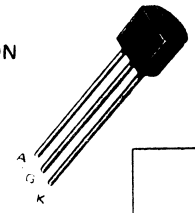
20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
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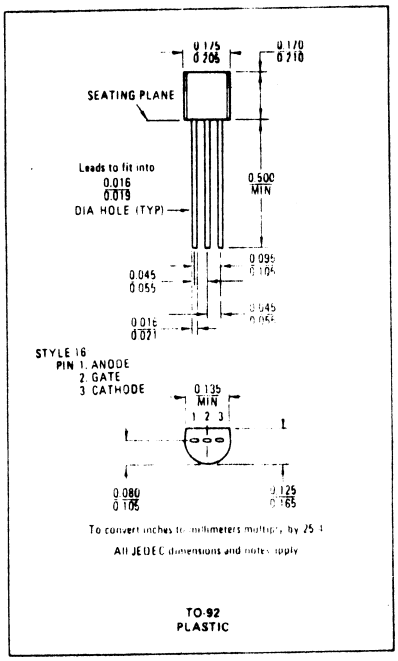
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2N6027
2N6028

SILICON
PROGRAMMABLE UNIJUNCTION
TRANSISTORS

40 VOLTS
375 mW





TO-92
PLASTIC

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Power Dissipation(1) Derate Above 25°C	P_F $1/\theta_{JA}$	375 5.0	mW mW/°C
DC Forward Anode Current(2) Derate Above 25°C	I_T	200 2.67	mA mA/°C
*DC Gate Current	I_G	±50	mA
Repetitive Peak Forward Current 100 μs Pulse Width, 1.0% Duty Cycle *20 μs Pulse Width, 1.0% Duty Cycle	I_{TRM}	 1.0 2.0	 Amp Amp
Non-Repetitive Peak Forward Current 10 μs Pulse Width	I_{TSM}	5.0	Amp
*Gate to Cathode Forward Voltage	V_{GKF}	40	Volt
*Gate to Cathode Reverse Voltage	V_{GKR}	-5.0	Volt
*Gate to Anode Reverse Voltage	V_{GAR}	40	Volt
*Anode to Cathode Voltage	V_{AK}	±40	Volt
Operating Junction Temperature Range	T_J	-50 to +100	°C
*Storage Temperature Range	T_{stg}	-55 to +150	°C

*Indicates JEDEC Registered Data
(1)JEDEC Registered Data is 300 mW, derating at 4.0 mW/°C.
(2)JEDEC Registered Data is 150 mA.

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

Characteristic		Figure	Symbol	Min	Typ	Max	Unit
*Peak Current		2,9,11	I_P				μA
(V_S = 10 Vdc, R_G = 1.0 MΩ)	2N6027			–	1.25	2.0	
	2N6028			–	0.08	0.15	
(V_S = 10 Vdc, R_G = 10 k ohms)	2N6027			–	4.0	5.0	
	2N6028			–	0.70	1.0	
*Offset Voltage		1	V_T				Volts
(V_S = 10 Vdc, R_G = 1.0 MΩ)	2N6027			0.2	0.70	1.6	
	2N6028			0.2	0.50	0.6	
(V_S = 10 Vdc, R_G = 10 k ohms)	(Both Types)			0.2	0.35	0.6	
*Valley Current		1,4,5,	I_V				μA
(V_S = 10 Vdc, R_G = 1.0 MΩ)	2N6027				18	50	
	2N6028			-	18	25	
(V_S = 10 Vdc, R_G = 10 k ohms)	2N6027			70	270		
	2N6028			25	270		
(V_S = 10 Vdc, R_G = 200 Ohms)	2N6027			1.5	-		mA
	2N6028			1.0	–		
*Gate to Anode Leakage Current		–	I_{GAO}				nAdc
(V_S = 40 Vdc, T_A = 25°C, Cathode Open)					1.0	10	
(V_S = 40 Vdc, T_A = 75°C, Cathode Open)					3.0		
Gate to Cathode Leakage Current			I_{GKS}		5.0	50	nAdc
(V_S = 40 Vdc, Anode to Cathode Shorted)							
*Forward Voltage (I_F = 50 mA Peak)		1,6	V_F	–	0.8	1.5	Volts
*Peak Output Voltage		3,7	V_o	6.0	11		Volts
(V_B = 20 Vdc, C_C = 0.2 μF)							
Pulse Voltage Rise Time		3	t_r	–	40	80	ns
(V_B = 20 Vdc, C_C = 0.2 μF)							

Quality Semi-Conductors