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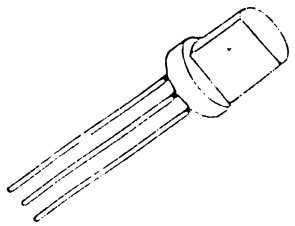
2N6138-1

Silicon Programmable Unijunction Transistor (PUT)

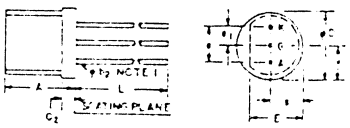
PNPN



absolute maximum ratings: (25°C unless otherwise specified)

Voltage	
*Gate-Cathode Forward Voltage	+40 V
*Gate-Cathode Reverse Voltage	-5 V
*Gate-Anode Reverse Voltage	+40 V
*Anode-Cathode Voltage	±40 V
Current	
*DC Anode Current†	150 mA
Peak Anode, Recurrent Forward (100 μsec pulse width, 1% duty cycle)	1 A
*(20 μsec pulse width, 1% duty cycle)	2 A
Peak Anode, Non-recurrent Forward (10 μsec)	5 A
*Gate Current	±20 mA
Capacitive Discharge Energy††	250 μJ
Power	
*Total Average Power†	300 mW
Temperature	
*Operating Ambient† Temperature Range	-50°C to +100°C

†Derate currents and powers 1%/°C above 25°C
††E = ½ CV² capacitor discharge energy with no current limiting



SYMBOL	INCHES MIN.	INCHES MAX.	MILLIMETERS MIN.	MILLIMETERS MAX.
A	.170	.265	4.32	6.73
ϕb2	.016	.019	.406	.483
ϕD	.165	.205	4.19	5.21
E	.110	.155	2.79	3.94
e	.050	.105	2.41	2.67
e1	.045	.055	1.14	1.40
L	.500		12.70	
C2		.075		1.9
ϕ	.085	.115	2.03	2.92

NOTE 1: LEAD DIAMETER IS CONTROLLED IN THE ZONE BETWEEN .070 AND .250 FROM THE SEATING PLANE, BETWEEN .250 AND END OF LEAD A MAX OF .021 IS HELD.

electrical characteristics: (25°C unless otherwise specified)

		Fig. No.	Min.	Max.	
*Peak Current (V_s = 10 Volts)	I_P	3			
(R_G = 1 Meg)				2	μA
(R_G = 10 k)				5	μA
*Offset Voltage (V_s = 10 Volts)	V_T	3			
(R_G = 1 Meg)			.2	1.6	Volts
(R_G = 10 k)			.2	.6	Volts
*Valley Current (V_s = 10 Volts)	I_V	3			
(R_G = 1 Meg)				50	μA
(R_G = 10 k)			70		μA
(R_G = 200 Ω)			1.5		mA
Anode Gate-Anode Leakage Current					
*(V_s = 40 Volts, T = 25°C)	I_{GAO}	4		10	nA
(T = 75°C)				100	nA
Gate to Cathode Leakage Current (V_s = 40 Volts, Anode-cathode short)	I_{GKS}	5		100	nA
*Forward Voltage (I_F = 50 mA)	V_F			1.5	Volts
*Pulse Output Voltage	V_O	6	6		Volts
Pulse Voltage Rate of Rise	t_r	6		80	nsecs.