

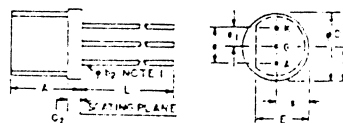
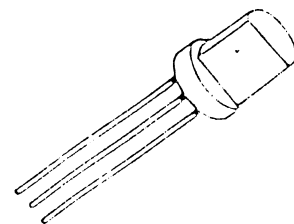
2N6138 - 1

Silicon
**Programmable
 Unijunction
 Transistor**
 (PUT)



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†	-50°C to +100°C
Temperature Range	



SYMBOL	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
A	.170	.265	4.32	6.73
#1	.018	.019	.46	.48
#2	.160	.200	4.13	5.21
C	.110	.150	2.79	3.84
#	.090	.100	2.41	2.67
#1	.040	.050	1.14	1.40
L	.200		5.08	
C1		.075		1.9
#	.090	.110	2.30	2.82

NOTE: 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 WELD.

†Derate currents and powers 1%/°C above 25°C

††E = 1/2 CV² capacitor discharge energy with no current limiting

electrical characteristics: (25°C unless otherwise specified)

	Fig. No.	Min.	Max.	
*Peak Current (V _s = 10 Volts) (R _G = 1 Mcg) (R _G = 10 k)	I _P 3		2 5	μA μA
*Offset Voltage (V _s = 10 Volts) (R _G = 1 Mcg) (R _G = 10 k)	V _T 3	.2 .2	1.6 .6	Volts Volts
*Valley Current (V _s = 10 Volts) (R _G = 1 Mcg) (R _G = 10 k) (R _G = 200 Ω)	I _V 3		50 70 1.5	μA μA mA
Anode Gate-Anode Leakage Current (V _s = 40 Volts, T = 25°C) (T = 75°C)	I _{GAO} 4		10 100	nA 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.

