

**SENSITRON**  
**SEMICONDUCTOR**

1N6638/U  
1N6639/U  
1N6640/U  
1N6641/U  
1N6642/U  
1N6643/U

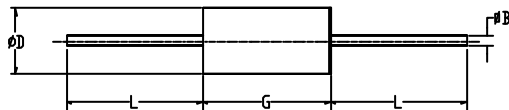
**TECHNICAL DATA**  
**DATA SHEET 4081, REV. A**

**SIGNAL OR COMPUTER DIODE 1N6638 THRU 1N6643**

- Switching Diode
  - Hermetic, non-cavity glass package
  - Metallurgically bonded
  - Upscreen to JANTX, JANTXV per MIL-PRF-19500/578,609 available
- Physical dimensions: Axial lead similar to Do-35 and surface mount similar to (D-5D)  
Maximum ratings  $T_A=+25^{\circ}\text{C}$ :

Types	$V_{BR}$	$V_{RWM}$	$I_o$	$I_{FSM}$ $T_p=1/120$ s	$T_{STG}, T_J$ $^{\circ}\text{C}$	$R_{\theta JL}$ $L=.375$ $^{\circ}\text{C/W}$	$R_{\theta JEC}$ $L=0$ $^{\circ}\text{C/W}$	$Z_{\theta JX}$ $^{\circ}\text{C/W}$
1N6638,1N6638U	150	125	300	2.5	-65 to +175	160	50	25
1N6639,1N6639U	100	75	300	2.5	-65 to +175	160	50	25
1N6640,1N6640U	75	50	300	2.5	-65 to +175	160	50	25
1N6641,1N6641U	75	50	300	2.5	-65 to +175	160	50	25
1N6642,1N6642U	100	75	300	2.5	-65 to +175	160	50	25
1N6643, 1N6643U	75	50	300	2.5	-65 to +175	160	50	25

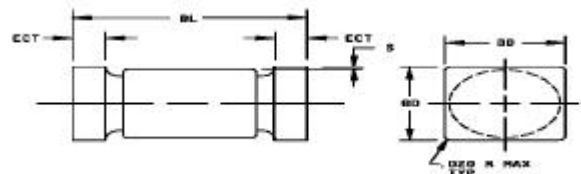
Axial



**1N6638 thru 1N6643**

PACKAG STYLE	DIMENSIONS - INCHES (MILLIMETERS)			
	phi B	phi D	G	L
DO-35	.018/.022 0.46/0.56	.056/.080 1.42/2.03	.130/.180 3.30/4.57	1.00/1.50 25.4/38.10

melf



**1N6638U thru 1N6643U**

PACKAGE STYLE	DIMENSIONS - INCHES (MILLIMETERS)			
	BL	BD	S	ECT
D-5D	.165/.195 4.19/4.95	.070/.085 1.78/2.16	0.003 Min	.019/.028 0.48/0.71

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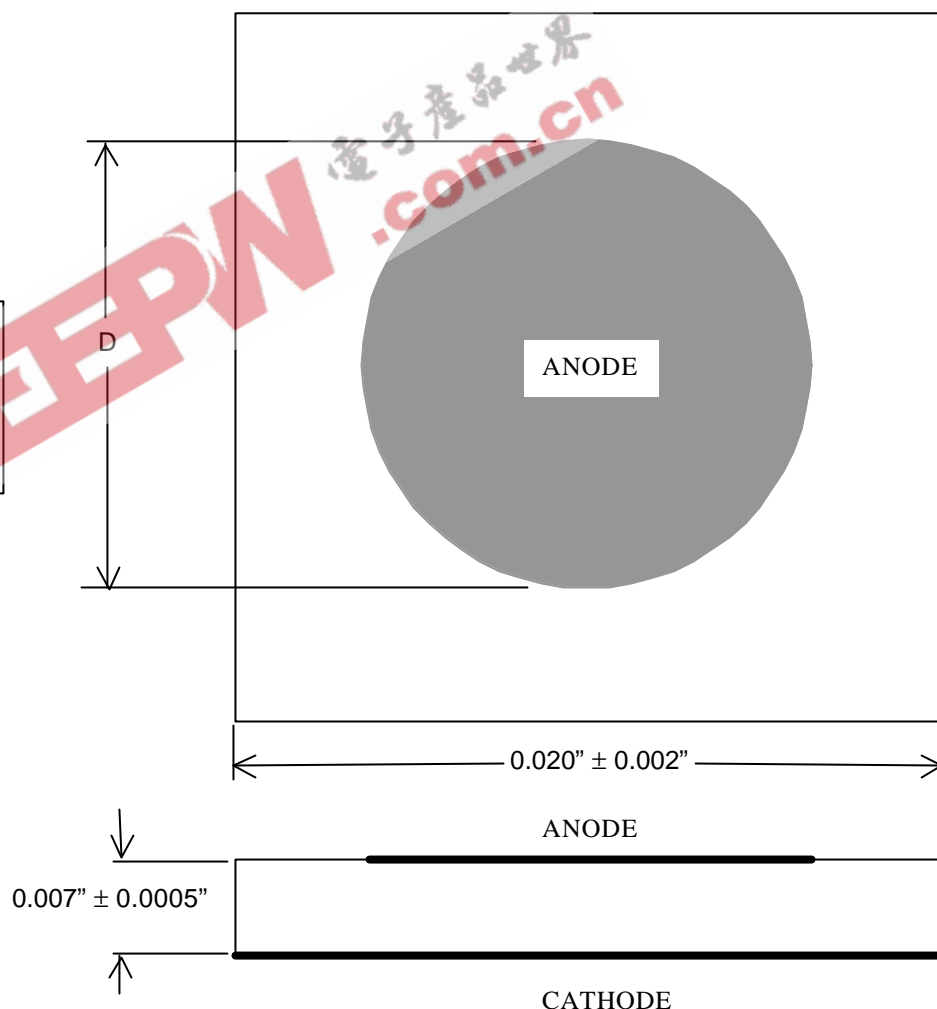
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**SIGNAL OR COMPUTER DIODE (DIE) 1C6638 THRU 1C6643 AND 1C4148**

Types	V <sub>BR</sub>	V <sub>RWM</sub>	I <sub>o</sub>	I <sub>FSM</sub> T <sub>p</sub> =1/120s	T <sub>STG</sub> , T <sub>J</sub>	V <sub>F1</sub>	V <sub>F2</sub>	I <sub>R1</sub> @ V <sub>R</sub> =20V	I <sub>R1</sub> @ V <sub>R</sub> = V <sub>RWM</sub>	t <sub>tr</sub> I <sub>RM</sub> =I <sub>F</sub> =10mA	C <sub>T1</sub> V <sub>R</sub> =0V
	V(pk)	V(pk)	mA	A(pk)	°C	V dc	V dc	nA dc	μA dc	ns	PF
1N6638, /578E	150	125	300	2.5	-65 to +175	0.80 (1)	1.1 (2)	35	0.5	4.5	2.5
1N6642, /578E	100	75	300	2.5	-65 to +175	0.80 (1)	1.2 (3)	25	0.5	5.0	5.0
1N6643, /578E	75	50	300	2.5	-65 to +175	0.80 (1)	1.2 (3)	50	0.5	6.0	5.0
1N6639, /609C	100	75	300	2.5	-65 to +175	1.20 (4)	-	-	0.1	4.0	2.5
1N6640, /609C	75	50	300	2.5	-65 to +175	1.00 (2)	-	-	0.1	4.0	2.5
1N6641, /609C	75	50	300	2.5	-65 to +175	1.10 (2)	-	-	0.1	5.0	3.0
1C4148, /116L	100	75	200	2.0	-65 to +200	0.80 (1)	1.2 (3)	25	0.5	5.0	-

- (1) I<sub>F</sub> = 10 mA
- (2) I<sub>F</sub> = 200 mA
- (3) I<sub>F</sub> = 100 mA
- (4) I<sub>F</sub> = 500 mA

1C6638 thru 1C6643  
 and  
 1C4148 Layout



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Table: Metal pad sizes:

	1C6638 thru 1C6643	1C4148
D	0.011" $\pm$ 0.001"	0.009" $\pm$ 0.001"

Top (anode) metallization: Al, 25 kA minimum or  
Ti/Ni/Ag, 30 kA minimum or  
Ti/Ni/Au, 13 kA minimum or  
Au, 10 kA minimum

Bottom (cathode) metallization: Ti/Ni/Ag, 30 kA minimum or  
Ti/Ni/Au, 12 kA minimum or  
Au, 4 kA minimum

# **SENSITRON**

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## **SEMICONDUCTOR**

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### **TECHNICAL DATA**

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