

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
- Manufacture & screen to TX/TXV/JANS per MIL-PRF-19500/578,609 using Sensitron specification, 7700-409X
- Physical dimensions: Axial lead similar to DO-35 and surface mount similar to (D-5D)

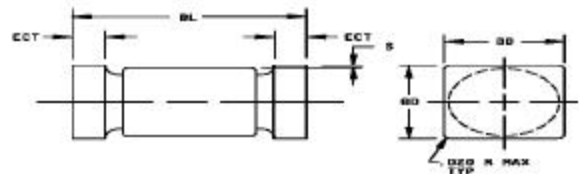
Maximum ratings $T_A = +25^\circ\text{C}$:

Types	V_{BR}	V_{RWM}	I_o	I_{FSM} $T_p = 1/120$ s	T_{STG}, T_J	$R_{\theta JL}$ L=.375	$R_{\theta JEC}$ L=0	$Z_{\theta JX}$
	V(pk)	V(pk)	MA	A(pk)	$^\circ\text{C}$	$^\circ\text{C/W}$	$^\circ\text{C/W}$	$^\circ\text{C/W}$
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



melf



1N6638 thru 1N6643

PACKAGE STYLE	DIMENSIONS - INCHES (MILLIMETERS)			
	ϕB	ϕD	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

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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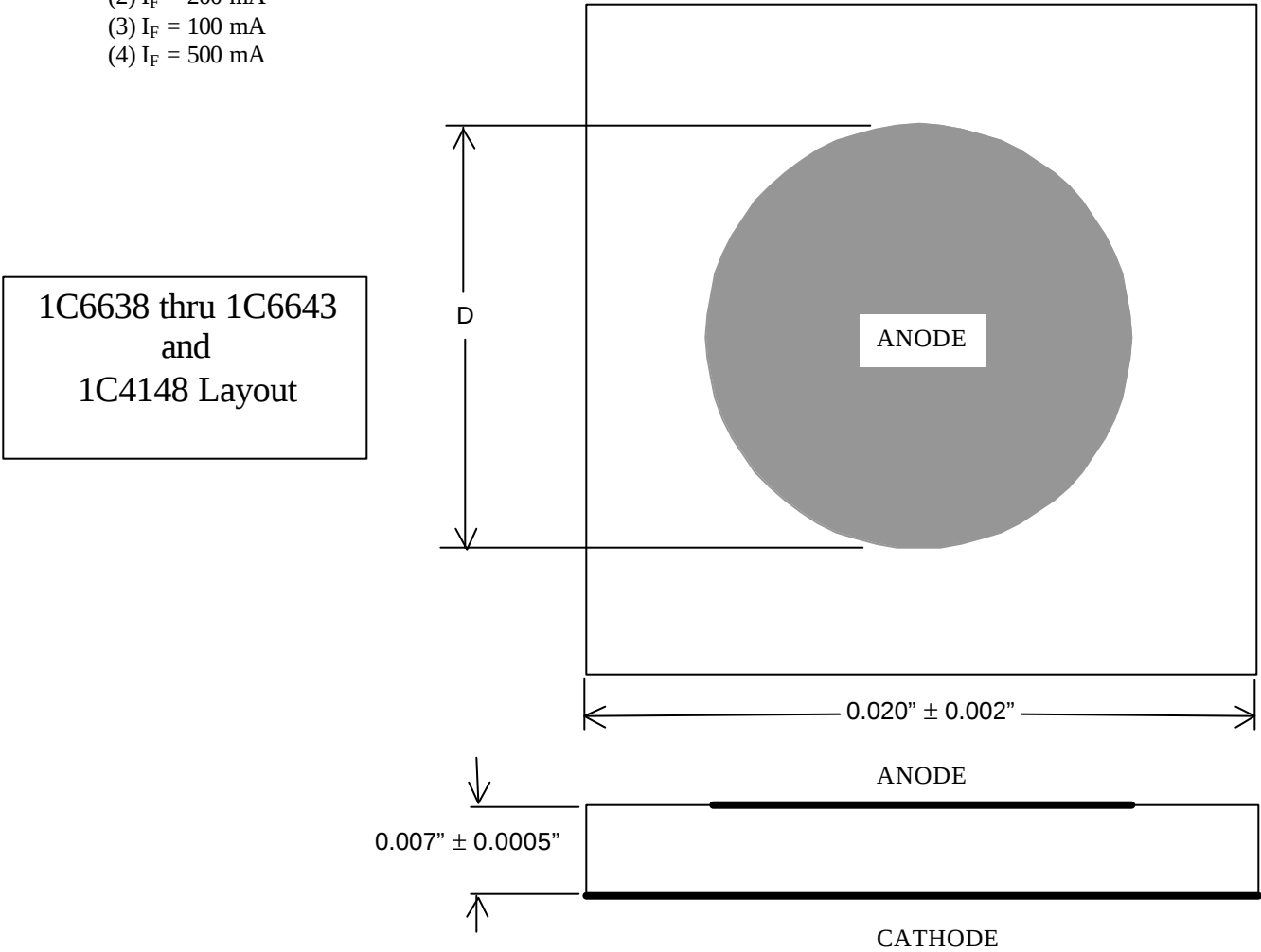
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TECHNICAL DATA
DATA SHEET 4081, REV. A

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

Types	V _{BR}	V _{RWM}	I _o	I _{FSM} T _p =1/120s	T _{STG} , T _J	V _{F1}	V _{F2}	I _{R1} @ V _R =20V	I _{R1} @ V _R = V _{RWM}	t _{rr} I _{RM} =I _F =10mA	C _{T1} V _R =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_F = 10 mA
(2) I_F = 200 mA
(3) I_F = 100 mA
(4) I_F = 500 mA



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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