

TECHNICAL DATA  
DATA SHEET 5422, REV. C

## Diode Array

- **Devices are serialized**
- **Eight 1N6642 diodes in surface mount package**
- **Die manufactured on qualified JANS line**
- **Built and screened to space level quality (SDA1005SS)**
- **Quality Conformance Inspection (QCI) in accordance with MIL-PRF-38534 is performed on each lot (SDA1005SS)**
- **Add suffix "S" for screening per MIL-PRF-38534, Class H (SDA1005S)**
- **Add suffix "SS" for Space Level Screening per MIL-PRF-38534, Class K (SDA1005SS)**

### MAX. RATINGS / ELECTRICAL CHARACTERISTICS FOR EACH DIODE

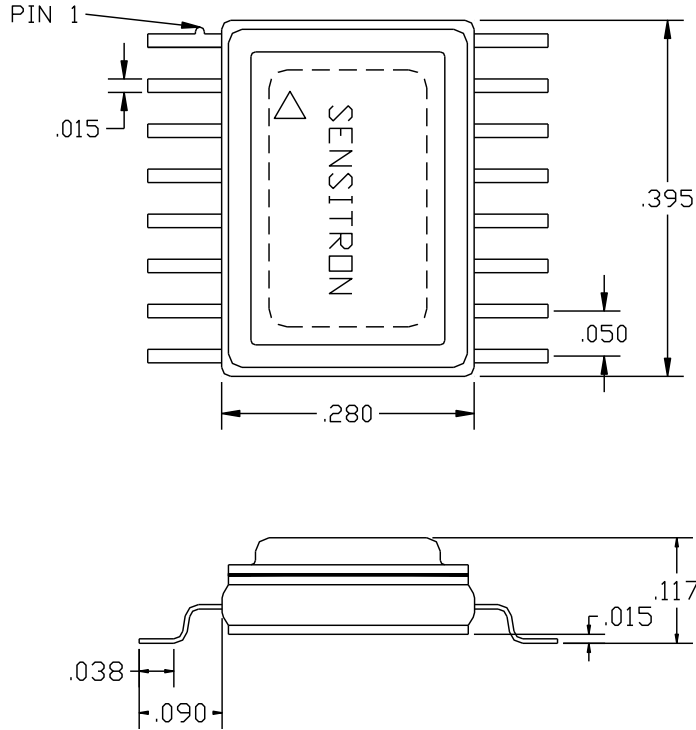
All rating at are  $T_A = 25^{\circ}\text{C}$  unless otherwise specified

RATING	SYMBOL	MAX	UNIT
Peak Inverse Voltage (DC)	PIV	75	V
Average DC Output Current Per diode	$I_O$	50	mA
Peak Single Cycle Surge Current <sup>(1) (3)</sup> ( $T_P=8.3\text{ms}$ single half-Sine wave)	$I_{FSM}$	500	mA
Peak Repetitive Surge Current <sup>(1) (2)</sup> ( $T_P=8.3\text{ms}$ half-Sine wave)	$I_{FRM}$	300	mA
Steady State Power Dissipation per Diode Junction <sup>(4)</sup>	$P_D$	400	mW
Steady State Power Dissipation per Package <sup>(5)</sup>	$P_T$	500	mW
Max. Operating Junction Temperature	$T_J$	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +175	$^{\circ}\text{C}$
Max. Forward Voltage $I_F = 50\text{mA}$	$V_{F1}$	1	V
Max. Reverse Current $V_R = 20\text{V}$ $V_R = 40\text{V}$	$I_{R1}$ $I_{R2}$	50 100	nA
Max. Reverse Recovery Time $I_F = 10\text{mA}$ , $I_{RM} = 10\text{mA}$	$t_{RR}$	10	ns
Max. Capacitance $f = 1\text{MHz}$ , $V_R = 0\text{V}$	$C_T$	5	pF
Thermal Resistance Junction to Case	$\theta_{JC}$	40	$^{\circ}\text{C/W}$

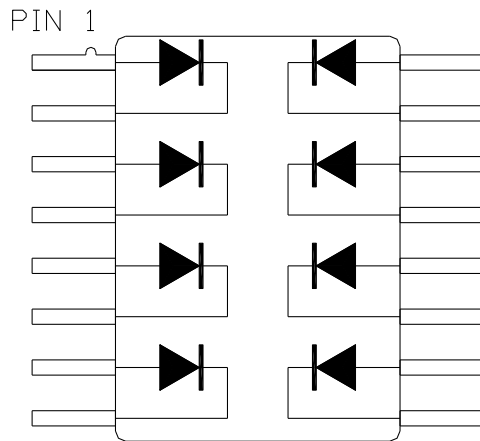
Note: (1) Each diode  
(2) Derate at  $2.4\text{mA}/^{\circ}\text{C}$  above  $25^{\circ}\text{C}$   
(3) Derate at  $4.0\text{mA}/^{\circ}\text{C}$  above  $25^{\circ}\text{C}$   
(4) Derate at  $3.2\text{mW}/^{\circ}\text{C}$  above  $25^{\circ}\text{C}$   
(5) Derate at  $4.0\text{mW}/^{\circ}\text{C}$  above  $25^{\circ}\text{C}$

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**Mechanical Outline**



**Electrical Schematic**



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**PART ORDERING INFORMATION**

Part Number	Sensitron Screening Level	Screened In Accordance to:
SDA1005	-	-
SDA1005S	S	MIL-PRF-38534, Class H
SDA1005SS	SS	MIL-PRF-38534, Class K

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