TABLE I. DEVICE PARAMETERS 1/

JPL PART # ST12148-	GENERIC PART #	MFR	MFR PART #	PKG TYPE	DETAIL SCREENING TESTS	ELECTRICAL CHARACTERISTICS & GROUP A TESTS	RADIATION (TID) LEVEL RAD(Si)
D5825ATR	SSR5825A	SSD	SSR5825A	AXIAL TO-5 2/	TABLE III	TABLE IV	100K 3/

NOTES:

1/ THIS DRAWING, IN CONJUNCTION WITH CS515581, IMPOSES ALL REQUIREMENTS FOR PROCUREMENT OF THESE DEVICES.

2/ DEVICE PHYSICAL DIMENSIONS SHALL CONFORM TO FIGURE I.

3/ SUFFICIENT RADIATION TOLERANCE TO THIS TID LEVEL IS GUARANTEED BY DESIGN FOR THIS DEVICE (SEE CS515581, PARAGRAPH 4.7.7).

4/ THIS DRAWING TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN..

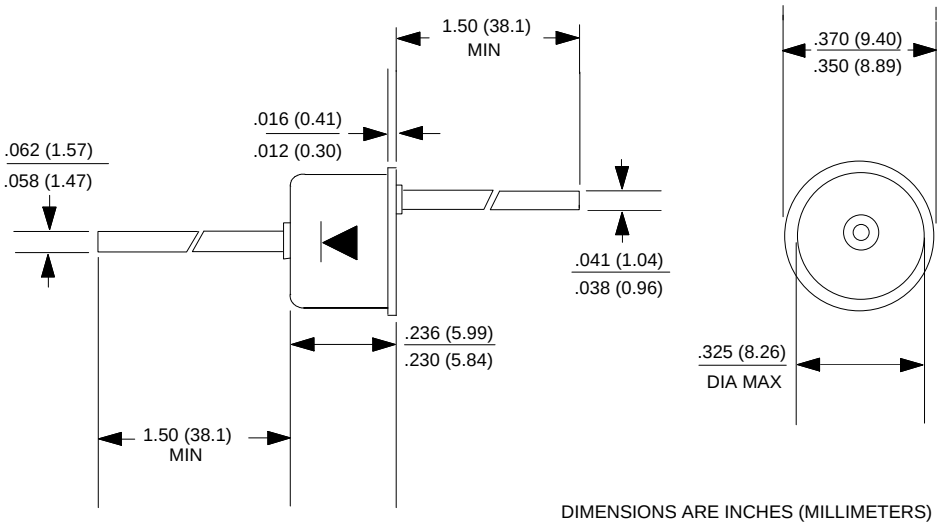

FIGURE 1. PHYSICAL CONFIGURATION

RELEASED THRU SECTION 356 DATA MANAGEMENT:			DATE:
REVISION: B	APPROVED BY (Section 514):		DATE:
APPROVED SOURCE(S)			The item listed in the approved source block and identified by vendor name, address, and part number will be evaluated and tested by the JPL Electronic Parts Reliability Section or its delegated alternate before being approved for use. Non-JPL users shall check with the Electronic Parts Reliability Section on the status of the part's approval before using.
VENDOR PART NO.	VENDOR	JPL PART NO.	
SSR5825A	SOLID STATE DEVICES, INC LA MIRADA, CA. 90638 CAGE NO 30043	ST12148-D5825ATR	
JET PROPULSION LABORATORY CALIFORNIA INSTITUTE OF TECHNOLOGY			CAGE NO. 23835
Procurement Specification: CS515581 Screening Specification: ZPP-2∅73-GEN Custodian: Electronic Parts Reliability Section 514	TITLE: DIODE, SILICON RECTIFIER, POWER SCHOTTKY		DETAIL SPECIFICATION ST12148 SHEET 1 OF 3

FILE: (Sec.514): F:\USERS\514\SPECS\ST12148.B

TABLE II. MANUFACTURERS MAXIMUM RATINGS (T_C=25°C)

PARAMETER	RATING	UNITS
V_R	40	Vdc
I_O	15	A
I_{FSM}	300	A
$R_{TH(J-C)}$	7	°C/W
T_J, T_{STG}	-65 TO 150	°C

TABLE III. DETAIL SCREENING REQUIREMENTS

SCREEN (SEE MIL-S-19500, TABLE II)	TEST CONDITIONS/REQUIREMENTS
3. TEMPERATURE CYCLE	MIL-STD-750, METHOD 1051, TEST CONDITION G
9. I NTERIM ELECTRICAL PARAMETERS	V_{F1}, I_{R1} PER TEST CONDITIONS AND LIMITS OF TABLE IV.
10. HIGH TEMPERATURE REVERSE BIAS (HTRB)	MIL-STD-750, METHOD 1038, CONDITION A, 48 HOURS AT T_A= 125°C, V_R= 32 Vdc.
11. INTERIM ELECTRICAL AND DELTA PARAMETERS.	SAME PARAMETERS AS STEP 9 ABOVE. DELTA LIMITS: ΔI_{R1}= ±20% OF INITIAL OR ±1 mA WHICHEVER IS GREATER. ΔV_{F1}= ±25 mV FROM INITIAL VALUE.
12. POWER BURN-IN	MIL-STD-750, METHOD 1038, CONDITION B; OPERATED AS HALF-WAVE RECTIFIERS; V_R= 32 $V_{(pk)}$, I_O= 10 A, f= 60 HZ, T_C= 75°C,
13. FINAL ELECTRICAL TESTS A. PARAMETERS B. DELTA LIMITS	 SUBGROUPS 2 AND 3 OF TABLE IV. SAME PARAMETERS AND LIMITS AS 11 ABOVE.

TABLE IV. GROUP A ELECTRICAL TESTS

TEST	MIL-STD-750 METHOD	TEST CONDITIONS	LIMITS		
			MIN	MAX	UNITS
SUBGROUP 2 T_A=25°C, REVERSE LEAKAGE, I_{R1}	4016	V_R=40 Vdc		5	mA
FORWARD VOLTAGE, V_{F1}	4011	I_F=5 Adc 1/		0.42	Vdc
FORWARD VOLTAGE, V_{F2}	4011	I_F=10 Adc 1/		0.55	Vdc
CAPACITANCE, C_1	4001	V_R=10 Vdc, f=1 MHZ		800	pf
SUBGROUP 3 TEMPERATURE TESTS REVERSE LEAKAGE, I_{R2}	4016	V_R=40 Vdc, T_A=100°C,		200	mA
SUBGROUPS 4 THROUGH 7 2/					

NOTES:

1/ PULSE TEST: PULSE WIDTH ≤ 300usec; DUTY CYCLE ≤ 2%.

2/ THESE TESTS NOT REQUIRED UNLESS SPECIFIED.

Filename:	ST12148B.DOC
Directory:	H:\USERS\514\SPECS\ACT-DETL
Template:	F:\USERS\EPOWELL\WINWORD\SPEC.DOT
Title: DIODE, SILICON RECTIFIER	
Subject:	
Author:	Ed Powell
Keywords:	
Comments:	POWER SCHOTTKY, 15A,40V
Creation Date:	02/03/94 11:34 AM
Revision Number:	5
Last Saved On:	02/04/94 8:47 AM
Last Saved By:	Ed Powell
Total Editing Time:	228 Minutes
Last Printed On:	08/08/95 1:05 PM
As of Last Complete Printing	
Number of Pages:	3
Number of Words:	400 (approx.)
Number of Characters:	2,285 (approx.)