TABLE I. DEVICE PARAMETERS 1/

JPL PART # ST12238-	GENERIC PART #	MFR	MFR PART #	PKG TYPE	DETAIL SCREENING TESTS	ELECTRICAL CHARACTERISTICS & GROUP A TESTS	RADIATION (TID) LEVEL RAD(Si)
DO245CTR D245CRTR	USD245	MSC	USD245C USD245CR	TO39 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 1.

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..

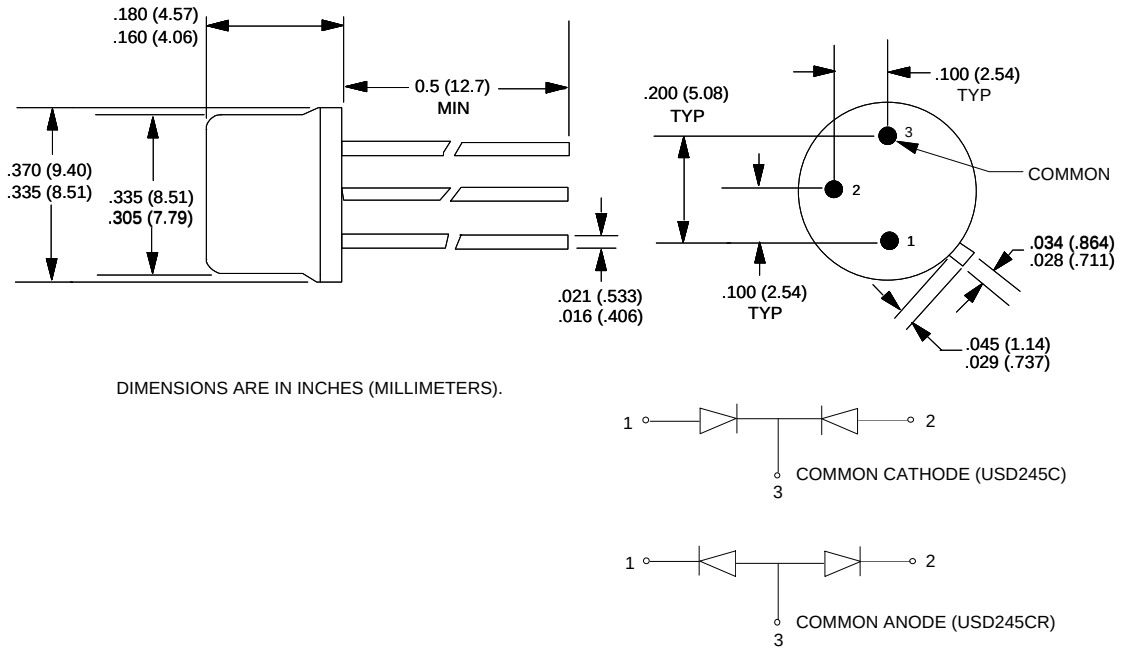

FIGURE 1. PHYSICAL CONFIGURATION

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.	
SEE TABLE 1	MICROSEMI CORPORATION WATERTOWN, MA. 02172 CAGE NO 12969	SEE TABLE 1	
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, DUAL SCHOTTKY, 2A, 45V	DETAIL SPECIFICATION ST12238 SHEET 1 OF 3	

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

PARAMETER	RATING	UNITS
V_R	45	Vdc
$I_{F(AV)}$ 1/	2	A
$I_{FM(SURGE)}$ 2/	80	A
$R_{TH(J-A)}$	175	°C/W
T_J, T_{STG}	-65 TO 175	°C

NOTES:

1/ 50% DUTY CYCLE, EITHER LEG ALONE.

2/ 1/2 SINE WAVE PULSE FOR 8.3 mS.

TABLE III. DETAIL SCREENING REQUIREMENTS

SCREEN (SEE MIL-S-19500, TABLE II)	TEST CONDITIONS/REQUIREMENTS
3. TEMPERATURE CYCLE	MIL-STD-750, METHOD 1051, CONDITION G.
3a. REVERSE ENERGY TEST	MIL-S-19500/567, PARAGRAPH 4.5.2.
11. INTERIM ELECTRICAL AND DELTA PARAMETERS	V_{FM1}, V_{FM2}, I_{RM1} (PER TABLE IV).
12. POWER BURN-IN	MIL-STD-750, METHOD 1038, CONDITION B; OPERATED AS HALF-WAVE RECTIFIERS; 240 HOURS AT T_A=125°C, V_R= MAX RATED PER TABLE II; I_O= 0, F= 60Hz.
13. FINAL ELECTRICAL TESTS	
A. PARAMETERS	SUBGROUPS 2, 3 AND 4 OF TABLE IV.
B. DELTA LIMITS	DELTA LIMITS: V_{FM1}= ± 50mV V_{FM2}= ± 50mV I_{RM1}= ± 0.2mA OR ± 20%, WHICHEVER IS GREATER.

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_{RM1}	4016	V_R=45 Vdc 1/		2	mA
FORWARD VOLTAGE, V_{FM1}	4011	I_F=1.0 Adc 1/		0.48	Vdc
FORWARD VOLTAGE, V_{FM2}	4011	I_F=2.0 Adc 1/		0.56	Vdc
SUBGROUP 3 REVERSE LEAKAGE, I_{RM2}	4016	V_R=45 Vdc, T_J=125°C, 1/		20	mA
SUBGROUP 4 CAPACITANCE, C_T	4001	V_R=5 Vdc, f=1 MHZ		450	pF
SUBGROUPS 5 THROUGH 7 2/					

NOTES:

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

2/ THESE TESTS NOT REQUIRED UNLESS SPECIFIED.

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