

Microsemi Corp.

The diode experts

SANTA ANA, CA

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(714) 979-8220

SCOTTSDALE, AZ

1N2927 thru 1N2934A

FEATURES

- Hermetically sealed TO-18 package.
- Weldable gold plated kovar leads.
- Temperature stability, uniformity and reliability.
- Available with 2% tolerance on Peak Point Current.
- Meets requirements of MIL-S-19500

MAXIMUM RATINGS

Operating Temperature: -65°C to $+150^{\circ}\text{C}$.

Storage Temperature: -65°C to $+200^{\circ}\text{C}$.

Lead Temperature (.25-inches from case for 10 seconds): $+250^{\circ}\text{C}$.

ELECTRICAL CHARACTERISTICS

JEDEC TYPE NUMBER	STATIC CHARACTERISTICS						DYNAMIC CHARACTERISTICS				
	PEAK POINT CURRENT I_p		MAXIMUM VALLEY POINT CURRENT I_v	MAXIMUM PEAK POINT VOLTAGE V_p	MAXIMUM VALLEY POINT VOLTAGE V_v	FORWARD VOLTAGE V_F @ I_F		MAX. FORWARD CURRENT I_F (MAX.) @ 25°C	DERATE I_F MAX. ABOVE 25°C	MAX. REVERSE CURRENT I_R (MAX.) @ 25°C	
	mA		mA	mV	mV	mV		mA	$\mu\text{A}/^{\circ}\text{C}$	mA	
	MIN.	MAX.				MIN.	MAX.				
1N2927	.09	.11	.035	75	475	600	1000	.11	0.50	3.5	1.0
1N2927A	.098	.102	.030	70	475	650	1000	.102	0.50	3.5	1.0
1N2928	.42	.52	.170	80	490	670	1000	.52	2.50	18.0	5.0
1N2928A	.46	.48	.145	74	490	710	1000		2.50	18.0	5.0
1N2929	.90	1.10	.350	80	500	700	1000	1.10	5.0	35.0	10.0
1N2929A	.98	1.02	.300	75	500	730	1000	1.02	5.0	35.0	10.0
1N2930	4.23	5.17	1.70	85	520	740	1000	5.17	15.0	100.0	30.0
1N2930A	4.61	4.79	1.45	79	520	750	1000	4.79	15.0	100.0	30.0
1N2931	9.0	11.0	3.50	85	530	740	1000	11.0	25.0	150.0	50.0
1N2931A	9.8	10.2	3.0	80	530	750	1000	10.2	25.0	150.0	50.0
1N2932	19.8	24.2	8.0	90	530	740	1000	24.2	40.0	240.0	80.0
1N2932A	21.56	22.44	6.5	82	530	750	1000	22.44	40.0	240.0	80.0
1N2933	42.3	51.7	17.0	90	530	740	1000	51.7	75.0	450.0	150.0
1N2933A	46.06	47.94	14.5	83	530	750	1000	47.94	75.0	450.0	150.0
1N2934	90.0	110.0	35.0	90	530	720	1000	110.0	150.0	900.0	300.0
1N2934A	98.0	102.0	30.0	85	530	730	1000	102.0	150.0	900.0	300.0

NOTE: All parameters tested at $\frac{1}{16}$ inch lead length from case.

SILICON TUNNEL DIODES

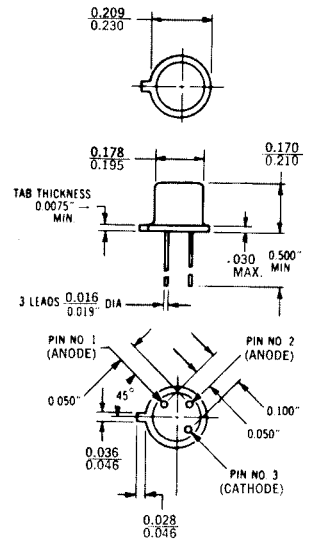


FIGURE 1
PACKAGE TO-18

MECHANICAL CHARACTERISTICS

CASE: Hermetically sealed TO-18 package.

LEAD MATERIAL: Gold plated kovar.

MARKING: Alpha numeric with JEDEC number.

POLARITY: Pins 1 and 2 (Anode) connected internally. Pin 3 (Cathode) in electrical contact with case.

1N2927 - 1N2934A

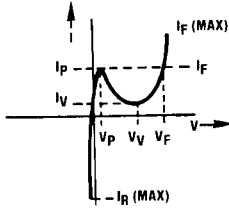


FIGURE 2
TUNNEL DIODE CHARACTERISTIC

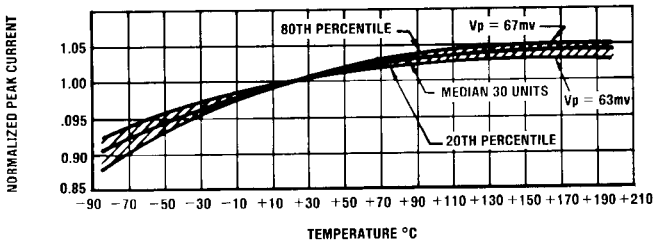


FIGURE 3
PEAK CURRENT vs. TEMPERATURE

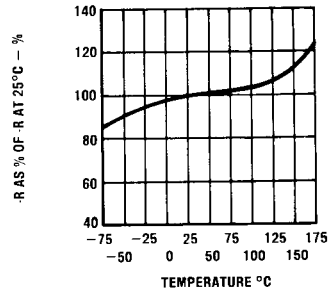


FIGURE 4
NEGATIVE RESISTANCE vs. TEMPERATURE

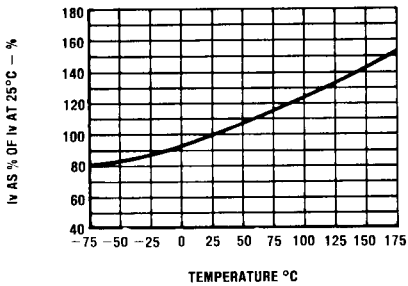


FIGURE 5
VALLEY CURRENT vs. TEMPERATURE

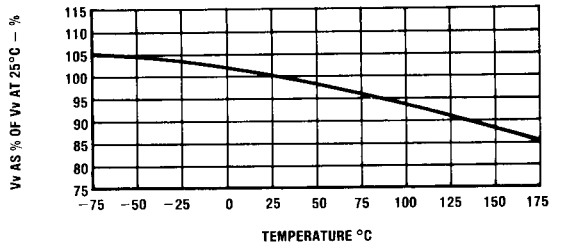


FIGURE 6
VALLEY VOLTAGE vs. TEMPERATURE