New Jersey Semi-Conductor Products, Inc.

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1N5823 thru 1N5825

SCHOTTKY BARRIER RECTIFIERS

VOLTAGE - 20 TO 40 Volts **CURRENT** - 5.0 Ampere

FEATURES

- High Reliability
- Schottky Barrier Junction
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability
- Low Power Loss/ High Efficiency
- High temperature soldering guaranteed: 250°C/10 seconds/.375:(9.5mm) lead lengths at 5 lbs(2.3kg) tension

MECHANICAL DATA

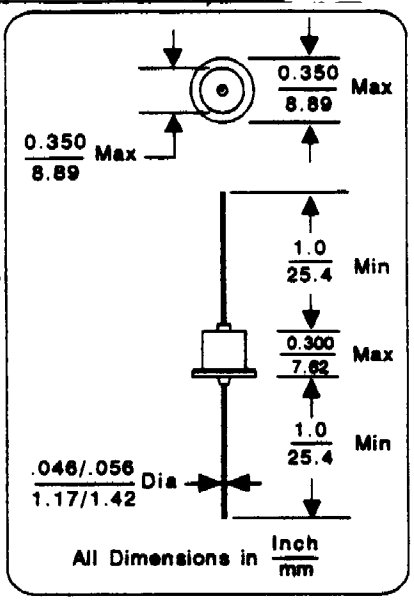
Case: Welded, hermetically sealed Construction

TERMINALS: Plated axial leads.

WEIGHT: 0.085 ounce, 2.4 grams

MOUNTING POSITION: Any

HANDLING PRECAUTIONS: None



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Single phase, half wave, 60 Hz, resistive or inductive load
For capacitive load, derate current by 20%
Ratings at 25°C ambient temperature unless otherwise specified

	SYMBOL	1N5823	1N5824	1N5825	UNIT
Peak Repetetive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	Volts
Non-Repetetive Peak Reverse Voltage	V_{RSM}	24	36	48	Volts
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	Volts
Average Rectified Forward Current (Note 1) $V_{R(equiv)} \leq 0.2V_{R(dc)}$, $T_C = 75°C$ $V_{R(equiv)} \leq 0.2V_{R(dc)}$, $T_L = 80°C$	 I_O I_O	 15 5.0			 Amps Amps
Ambient Temperature, Rated $V_{R(dc)}$ $P_{F(AV)} = 0$, $R_{\theta JA} = 25°C/W$	T_A	65	60	55	°C
Maximum Forward Surge Current 8.3 ms single half sine wave superimposed on rated load	I_{FSM}	500			Amps
Maximum Instantaneous Forward Voltage (Note 2) $I_F = 3.0$Amp $I_F = 5.0$Amp $I_F = 15.7$Amp	V_F	.330 .360 .470	.340 .370 .490	.350 .380 .520	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_C = 25°C$ $T_C = 100°C$	I_R I_R	10 100	10 125	10 150	mA mA
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	3.0			°C\W
Operating Temperature Range	T_J	-65 to +125			°C
Storage Temperature Range	T_{STG}	-65 to +125			°C

Note 1: Pulse Width = 300 us, Duty Cycle = 2%.
Note 2: $R_{\theta JA} = 25°C/W$. Thermal Resistance from Junction to Ambient at .375"(9.5mm) lead lengths, P.C. Board mounted

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