



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638

Phone: (562) 404-4474 * Fax: (562) 404-1773

ssdi@ssdi-power.com * www.ssdi-power.com

**1N6690-1N6693
and
1N6690US-1N6693US**

DESIGNER'S DATA SHEET

Part Number / Ordering Information^{1/}

1N66

- L **Screening**^{2/} = None
 TX = TX Level
 TXV = TXV Level
 S = S Level
- L **Package** = Axial
 SMS = Surface Mount Square Tab
- L **Voltage**
 - 90 = 600 V
 - 91 = 800 V
 - 92 = 1000 V
 - 93 = 1200 V

**20 AMP
600-1200 Volts
75 nsec
ULTRA FAST RECTIFIER**

- Features:
- Replaces DO-4 and DO-5
 - Ultra Fast Recovery
 - PIV to 1200 Volts
 - Low Reverse Leakage
 - Hermetically Sealed Void-Free Construction^{3/}
 - Monolithic Single Chip Construction
 - High Surge Rating
 - Low Thermal Resistance
 - Available in Surface Mount Versions (-US Suffix) and in Button Tab Mounting (See Data Sheet RU0129).
 - TX, TXV, and S-Level Screening Available^{2/}

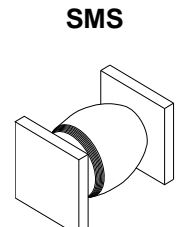
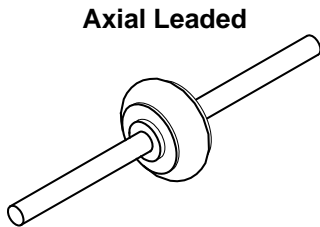
Maximum Ratings	Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	1N6690 & 1N6690US 1N6691 & 1N6691US 1N6692 & 1N6692US 1N6693 & 1N6693US	V_{RRM} V_{RWM} V_R	600 800 1000 1200 Volts
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, T _A = 100°C)	I_o	20	Amps
Repetitive Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on I _o , Allow Junction to Reach Equilibrium Between Pulses, T _A = 25°C)	I_{FSM}	375	Amps
Operating & Storage Temperature	Top & Tstg	-65 to +175	°C
Maximum Thermal Resistance Junction to Leads, L = 3/8 " Junction to End Tab	$R_{\theta JL}$ $R_{\theta JE}$	3.0 2.5	°C/W

Notes:

^{1/} For Ordering Information, Price, Operating Curves, and Availability – Contact Factory.

^{2/} Screening Based on MIL-PRF-19500. Specifics Available on Request.

^{3/} PIND Testing not Required on Void Free Devices per MIL-PRF-19500.





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Electrical Characteristics		Symbol	Max	Units
Instantaneous Forward Voltage Drop ($I_F = 20 \text{ Adc}$, 300-500 μs pulse)	$T_A = 25^\circ\text{C}$	V_{F1}	1.9	Vdc
	$T_A = -55^\circ\text{C}$	V_{F2}	2.2	
Reverse Leakage Current (Rated V_R , 300 μs pulse minimum)	$T_A = 25^\circ\text{C}$	I_{R1}	10	μA
	$T_A = 100^\circ\text{C}$	I_{R2}	2.0	mA
Junction Capacitance ($V_R = 10 \text{ Vdc}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)		C_J	250	pF
Reverse Recovery Time ($I_F = 500 \text{ mA}$, $I_R = 1\text{A}$, $I_{RR} = 250\text{mA}$, $T_A = 25^\circ\text{C}$)		t_{rr}	75	nsec

