SOLID STATE DEVICES, INC.
14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
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1N6690 - 1N6693 and 1N6690US - 1N6693US

Designer's Data Sheet

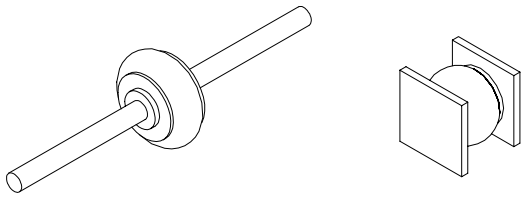
20 AMP 600 - 1200 VOLTS 75 ns ULTRA FAST RECTIFIER

FEATURES:

- **Replaces DO-4 and DO-5**
- **Ultra Fast Recovery**
- **PIV to 1200 Volts**
- **Low Reverse Leakage**
- **Hermetically Sealed Void-Free Construction** 1/
- **Monolithic Single Chip Construction**
- **High Surge Rating**
- **Low Thermal Resistance**
- **Available in Surface Mount (-US Suffix) and in Button Tab Mounting (See Data Sheet RU0129).**
- **TX, TXV and Space Level Screening Available**

1/ PIND Testing not required on Void-Free Devices per MIL-PRF-19500

AXIAL & SURFACE MOUNT



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, 60Hz, Sine Wave, T_C = 100 °C		**Io**	**20**	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on Io, allow junction to reach equilibrium between pulses, T_A = 25°C)		**I_{FSM}**	**375**	**Amps**
Operating and Storage Temperature		**Top & Tstg**	**-65 TO +175**	**°C**
Maximum Thermal Resistance Junction to Lead, L = 3/8" Junction to End Tab		 **$R_{\theta JL}$** **$R_{\theta JE}$**	 **3.0** **2.5**	**°C/W**

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

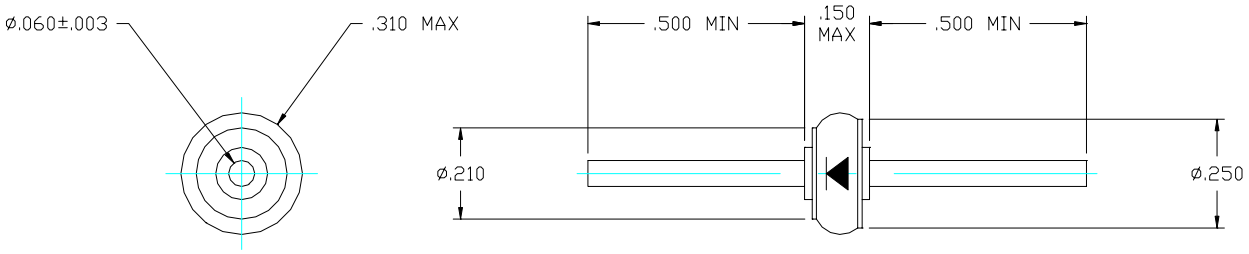
DATA SHEET #: RU0143C

1N6690 - 1N6693
and
1N6690US - 1N6693US

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Electrical Characteristics		SYMBOL	MAXIMUM	UNITS
Instantaneous Forward Voltage Drop (I_F = 20A_{DC}, 300 - 500 µsec Pulse)	T_A = 25°C T_A = -55°C	**V_{F1}** **V_{F2}**	**1.9** **2.2**	**V_{DC}**
Reverse Leakage Current (Rated V_R , 300µsec pulse minimum)	T_A = 25°C T_A = 100°C	**I_{R1}** **I_{R2}**	**10** **2.0**	**µA** **mA**
Junction Capacitance (V_R = 10V_{DC}, T_A = 25°C, f = 1MHz)		**C_J**	**250**	**pF**
Reverse Recovery Time (I_F = 500 mA, I_R = 1 A, I_{RR} = 250 mA, T_A = 25°C)		**t_{RR}**	**75**	**nsec**

CASE OUTLINE: Axial



CASE OUTLINE:
Surface Mount Square Tab (SMS)

