



SOLID STATE DEVICES, INC.

14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

Designer's Data Sheet

FEATURES:

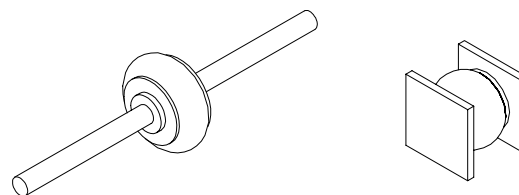
- Replaces DO-4 and DO-5
- Ultra Fast Recovery
- PIV to 1200 Volts
- Low Reverse Leakage
- Hermetically Sealed Void-Free Construction ^{1/}
- Monolithic Single Chip Construction
- High Surge Rating
- Low Thermal Resistance
- Available in Surface Mount (-US Suffix)
and in Button Tab Mounting (See Data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

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

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

**20 AMP
600 - 1200 VOLTS
75 ns
ULTRA FAST
RECTIFIER**

AXIAL & SURFACE MOUNT



Maximum Ratings		SYMBOL	VALUE	UNITS
Peak Repetitive Reverse and DC Blocking Voltage	1N6690 & 1N6690US	V_{RRM} V_{RWM} V_R	600	Volts
	1N6691 & 1N6691US		800	
	1N6692 & 1N6692US		1000	
	1N6693 & 1N6693US		1200	
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, $T_C = 100^\circ\text{C}$)		I_o	20	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on I_o , allow junction to reach equilibrium between pulses, $T_A = 25^\circ\text{C}$)		I_{FSM}	375	Amps
Operating and Storage Temperature		Top & Tstg	-65 TO +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Lead, $L = 3/8"$ Junction to End Tab		$R_{\theta JL}$	3.0	$^\circ\text{C/W}$
		$R_{\theta JE}$	2.5	

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**

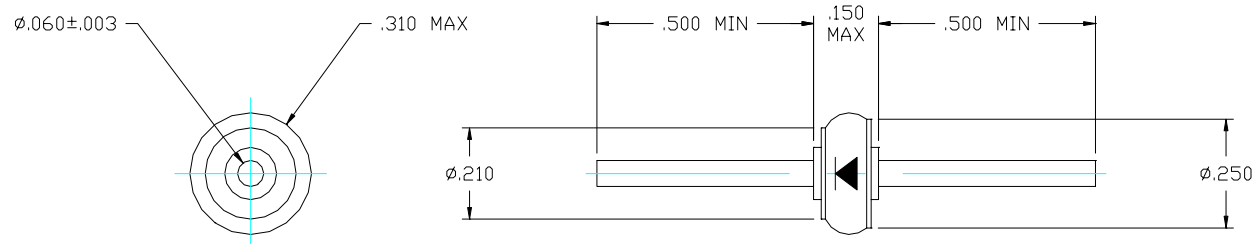


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Electrical Characteristics		SYMBOL	MAXIMUM	UNITS
Instantaneous Forward Voltage Drop ($I_F = 20A_{DC}$, 300 - 500 μ sec Pulse)	$T_A = 25^\circ C$ $T_A = -55^\circ C$	V_{F1} V_{F2}	1.9 2.2	V_{DC}
Reverse Leakage Current (Rated V_R , 300 μ sec pulse minimum)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

CASE OUTLINE: Axial



**CASE OUTLINE:
Surface Mount Square Tab (SMS)**

