



PRELIMINARY

SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada, CA 90638  
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

**SDR647CT-28  
thru  
SDR648CT-28**

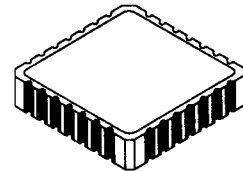
## Designer's Data Sheet

### FEATURES:

- Ultrafast Recovery: 60 nsec Maximum
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Surface Mount Package
- Gold Eutectic Die Attach available
- Ultrasonic Aluminum Wire Bonds
  
- TX, TXV and Space Level Screening Available

**20 AMPS  
700-800 VOLTS  
60 nsec  
ULTRA FAST  
CENTERTAP RECTIFIER**

28 PIN CLCC



### MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage  SDR647CT-28 SDR648CT-28	VRRM	700	Volts
	VRWM	800	
	VR		
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C) note 1	IO	20*	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, TA=25°C) note 1	IFSM	100*	Amps
Operating and storage temperature	Top & Tstg	-65 to +200	°C
Maximum Thermal Resistance Junction to Case, each individual diode Junction to Case, note 1	RθJC	11.0	°C/W
		4.5	

Note 1 Both legs tied together

\* Package limited

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

DATA SHEET#: RU0083 A

MED

# SDR647CT-28 thru SDR648CT-28

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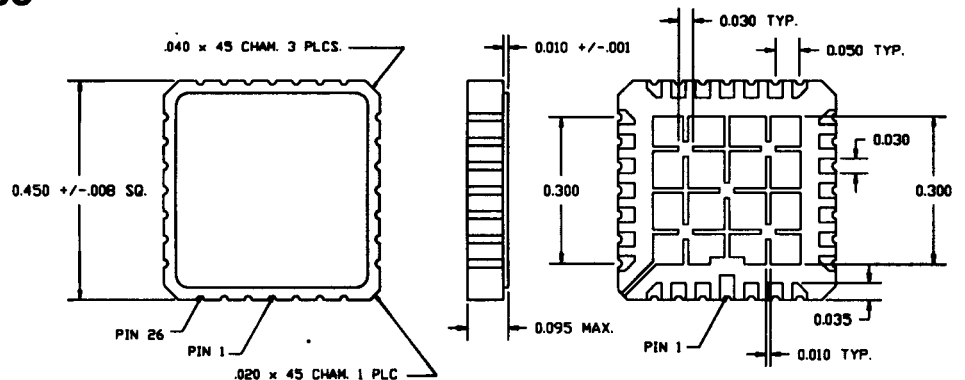
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## ELECTRICAL CHARACTERISTICS (Per Leg)

CHARACTERISTICS	SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop (IF = 5 Adc, TA=25°C, 300ms Pulse) (IF = 10 Adc, TA=25°C, 300ms Pulse)	VF	1.15 1.25	Vdc
Instantaneous Forward Voltage Drop (IF = 5 Adc, TA= - 55°C, 300ms Pulse) (IF = 5 Adc, TA= 100°C, 300ms Pulse)	VF	1.07 1.25	Vdc
Reverse Leakage Current (Rated VR, TA=25°C, 300ms pulse minimum)	IR	50	µA
Reverse Leakage Current (Rated VR, TA=100°C, 300ms pulse minimum)	IR	5	mA
Junction Capacitance (VR = 10 Vdc, TA=25°C, f= 1 MHz )	CJ	70	pf
Reverse Recovery Time (IF=500mA, IR=1 A, IRR=250mA, TA=25°C)	t <sub>rr</sub>	60	nsec

### CASE OUTLINE: 28 PIN CLCC PIN OUT:

CATHODE: 5-11  
ANODE 1: 1, 15-28  
ANODE 2: 2, 3, 13, 14



### TYPICAL OPERATING CURVES TA=25°C Unless otherwise specified

