

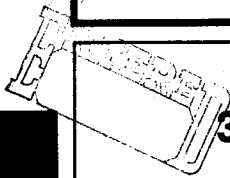
**SDR623CT/CAP6
 thru
 SDR625CT/CAP6**

Designer's Data Sheet

- FEATURES:**
- Hyperfast Recovery: 35 nsec Maximum
 - Isolated low profile package
 - Ceramic Feed Thrus
 - Eutectic Die Attach Available
 - Hermetically Sealed
 - Low Reverse Leakage

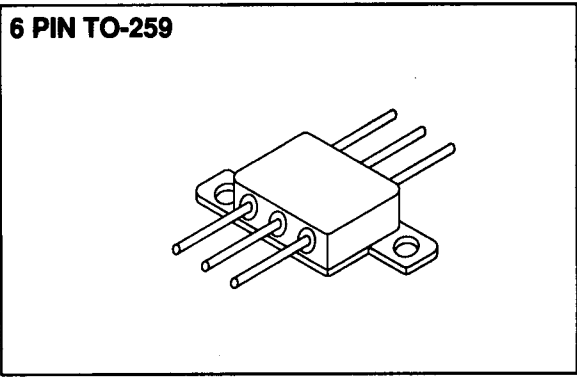
 - Dual Centertap:
 1 Common Anode, 1 Common Cathode

 - TX, TXV and Space Level Screening Available



**40 AMP
 300-500 VOLTS
 35 nsec**

**COMMON ANODE & CATHODE
 HYPERFAST CENTERTAP
 RECTIFIER**



MAXIMUM RATINGS @ 25 C (Unless Otherwise Specified)

| RATING | SYMBOL | VALUE | UNIT |
|--|------------|-------------------|-------|
| Peak Repetitive Reverse and DC Blocking Voltage, note 3 | VRRM | 300 400 500 | Volts |
| SDR623CT/CAP6 | VRWM | | |
| SDR624CT/CAP6 | VR | | |
| SDR625CT/CAP6 | | | |
| Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C) | IO | 80 | Amps |
| Peak Surge Current (8.3 ms Pulse, Half Sine Wave, TA=25°C) note 1 | IFSM | 600 | Amps |
| Operating and storage temperature | Top & Tstg | -65 to +200 | °C |
| Maximum Thermal Resistance Junction to Case, each individual diode | RθJC | 1.9 | °C/W |
| Junction to Case, note 2 | | 0.65 | |

Note 1 Each pair of diodes
 Note 2 All legs connected together
 Note 3 550V class available upon request

SDR623CT/CAP6 thru SDR625CT/CAP6

PRELIMINARY



SOLID STATE DEVICES, INC

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

ELECTRICAL CHARACTERISTICS (Per Leg)

| CHARACTERISTICS | SYMBOL | MAXIMUM | UNIT |
|---|----------|--------------|---------------|
| Instantaneous Forward Voltage Drop ($I_F = 10 \text{ A dc}$, $T_A = 25^\circ\text{C}$, 300 μs Pulse) ($I_F = 20 \text{ A dc}$, $T_A = 25^\circ\text{C}$, 300 μs Pulse) | V_F | 1.35 1.55 | Vdc |
| Instantaneous Forward Voltage Drop ($I_F = 10 \text{ A dc}$, $T_A = 100^\circ\text{C}$, 300 μs Pulse) ($I_F = 10 \text{ A dc}$, $T_A = -55^\circ\text{C}$, 300 μs Pulse) | V_F | 1.25 1.45 | Vdc |
| Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μs pulse minimum) | I_R | 50 | μA |
| Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μs pulse minimum) | I_R | 5 | mA |
| Junction Capacitance ($V_R = 10 \text{ Vdc}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$) | C_J | 150 | 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} | 35 | nsec |

CASE OUTLINE: TO-259-6

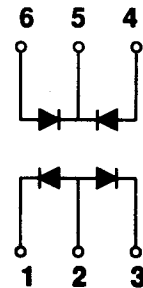
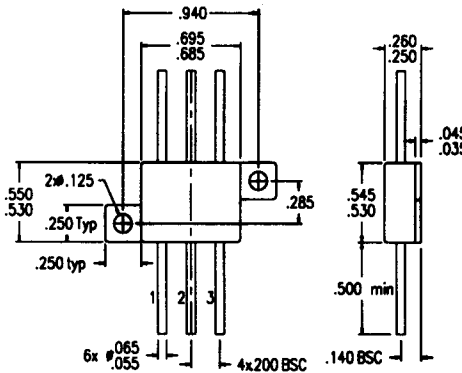
PIN OUT:

COMMON ANODE

- PIN 1: CATHODE
- PIN 2: ANODE
- PIN 3: CATHODE

COMMON CATHODE:

- PIN 4: ANODE
- PIN 5: CATHODE
- PIN 6: ANODE



TYPICAL OPERATING CURVES

$T_A = 25^\circ\text{C}$ Unless otherwise specified

