



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

SDR620J, M & Z Thru SDR622J, M & Z

20 AMP HYPER FAST RECTIFIER 100 – 200 VOLTS 35 nsec

- Features:**
- Hyper Fast Recovery: 35nsec Maximum^{3/}
 - Low Reverse Leakage Current
 - Low Junction Capacitance
 - Hermetically Sealed Isolated Package
 - Higher Voltages Available
 - Available in Centertap Versions
 - Replaces 1N5816 and 1N5816R
 - TX, TXV, and S-Level Screening Available^{2/}

Designer's Data Sheet

Part Number/Ordering Information^{1/}
SDR620

Screening^{2/} ___ = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

Leg Bend Option ___ = Straight
 (See Figure 1) DB = Down Bend
 UB = Up Bend

Package J = TO-257
 M = TO-254
 Z = TO-254Z

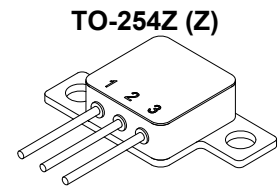
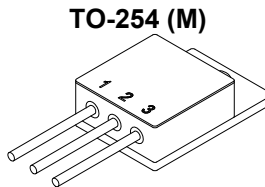
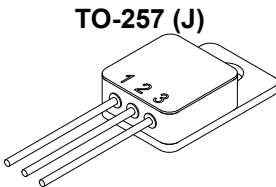
Pin Configuration ___ = Normal
 (See Table 1) R = Reverse

Family/Voltage SDR620 = 100V
 SDR621 = 150V
 SDR622 = 200V

Maximum Ratings ^{4/}	Symbol	Value	Units
Peak Repetitive Reverse Voltage	SDR620J, M & Z SDR621J, M & Z SDR622J, M & Z	V_{RRM} V_{RWM} V_R	100 150 200 Volts
Average Rectified Forward Current^{5/} (Resistive Load, 60 Hz Sine Wave, $T_A = 25^\circ C$)		I_O	20 Amps
Peak Surge Current^{5/} (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ C$)	J (TO-257) M (TO-254) & Z (TO-254Z)	I_{FSM}	200 300 Amps
Operating & Storage Temperature		$T_{OP} \text{ \& } T_{STG}$	-65 to +200 °C
Maximum Total Thermal Resistance^{5/} Junction to Case		$R_{\theta JC}$	1.7 °C/W

Notes:

- 1/ For ordering information, price, operating curves, and availability - contact factory.
- 2/ Screening based on MIL-PRF-19500. Screening flows available on request.
- 3/ Recovery conditions: $I_F = 500 \text{ mA}$, $I_R = 1 \text{ Amp}$, $I_{RR} = 250 \text{ mA}$.
- 4/ Unless otherwise specified, all maximum ratings / electrical characteristics @25°C.
- 5/ Pins 2 & 3 together.



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

DATA SHEET #: RC0031E

DOC



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

**SDR620J, M & Z
 Thru
 SDR622J, M & Z**

Electrical Characteristics (per leg) ^{4/}	Symbol	Max	Units
Instantaneous Forward Voltage Drop	300µsec Pulse, I _F = 10A, T _A = 25°C	V _{F1}	1.00
	300µsec Pulse, I _F = 20A, T _A = 25°C	V _{F2}	1.20
	300µsec Pulse, I _F = 10A, T _A = 100°C	V _{F3}	0.90
	300µsec Pulse, I _F = 10A, T _A = -55°C	V _{F4}	1.15
Reverse Leakage Current (Rated V _R , 300µsec Pulse Minimum)	T _A = 25°C	I _{R1}	10
	T _A = 100°C	I _{R2}	100
Reverse Recovery Time (I _F = 500 mA, I _R = 1 Amp, I _{RR} = 250 mA)	t _{RR}	35	nsec
Junction Capacitance (V _R = 10V _{DC} , T _A = 25°C, f = 1MHz)	C _J	225	pF

- Notes:** 1/ For ordering information, price, operating curves, and availability - contact factory.
 2/ Screening based on MIL-PRF-19500. Screening flows available on request.
 3/ Recovery conditions: I_F = 500 mA, I_R = 1 Amp, I_{RR} = 250 mA.
 4/ Unless otherwise specified, all maximum ratings / electrical characteristics @25°C.
 5/ Pins 2 & 3 together.

Case Outline: TO-257 (J)

Case Outline: TO-254 (M)

Case Outline: TO-254Z (Z)

Figure 1- Optional Lead Bends

Table 1- PIN ASSIGNMENT

Code	Configuration	Pin 1	Pin 2	Pin 3
—	Normal	Cathode	Anode	Anode
R	Reverse	Cathode	Cathode	Anode

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

DATA SHEET #: RC0031E

DOC