

RECTIFIER DIODE

Features

1. 20D series Diodes are designed for various power controls
2. Voltage rating up to 1600V

Typical Applications

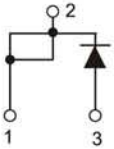
- AC/DC Converters
- Supplies for DC power equipment
- Field supply for DC motors
- Machine tool controls
- DC supply for PWM inverter

Ordering code

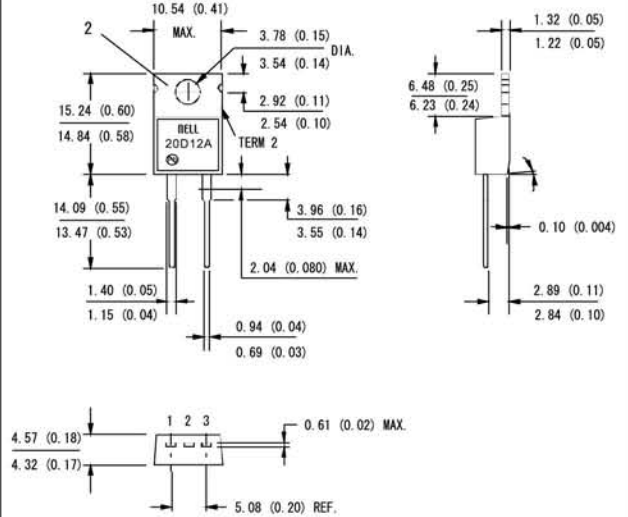
20 **D** **12** **A**

(1) (2) (3) (4)

- (1) Max. I_{RMS} on-state current
- (2) D-for standard recovery diodes
- (3) Voltage code, code x 100 = V_{RRM}/V_{DRM}
- (4) For case style A=TO-220AB, B=TO-P3



Case Style



All dimensions in millimeters(inches)

Electrical Characteristics

Symbol	Parameter	Condition	Value	Unit
$I_F(AV)$	Maximum average forward current	180° conduction, half sine wave $T_C=110^\circ C$	20	A
V_{RRM}	Repetitive peak reverse voltage	$t_p=10\text{ ms } V_{RMS} = V_{RRM} \times 1.1$	800 to 1600	V
I_{FSM}	Surge forward current	10ms Sine pulse no voltage reapplied	300	A
I^2_t	I^2_t for fusing		442	A^2S
V_{FM}	Peak forward voltage	@20A, $T_j=25^\circ C$	1.1	V
r_t	Forward slope resistance	$T_j=150^\circ C$	10.4	$m\Omega$
$V_{F(TO)}$	Threshold Voltage		0.85	V
T_j	Max.operation temperature range		-40 to 150	$^\circ C$
T_{stg}	Storage temperature range		-40 to 150	$^\circ C$
$R_{th(j-c)}$	Thermal resistance (junction to case)	DC operation	1.5	$^\circ C/W$
w_t	Approximate weight		2	g
T	Mounting torque	Not lubricated threads	6-12	kg-cm

Fig. 1 - Current Rating Characteristics

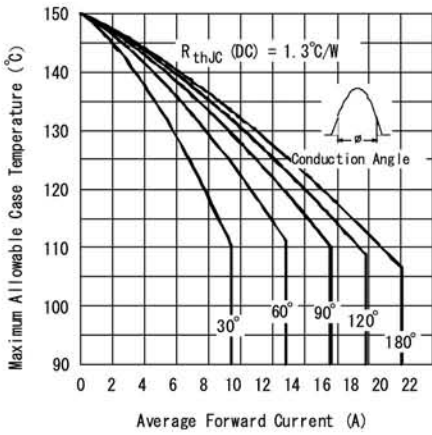


Fig. 2 - Current Rating Characteristics

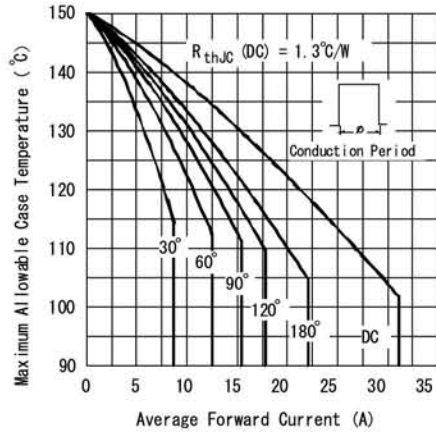


Fig. 3 - Forward Power Loss Characteristics

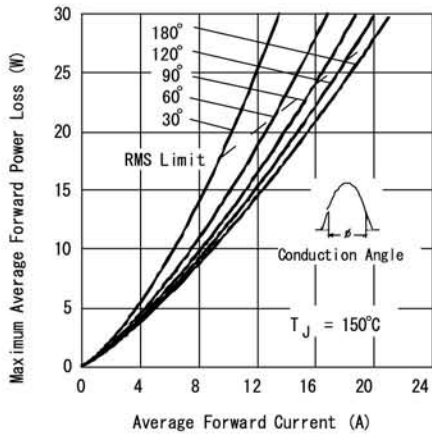


Fig. 4 - Forward Power Loss Characteristics

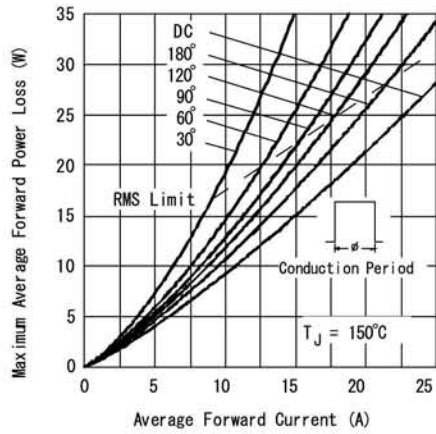


Fig. 5 - Maximum Non-Repetitive Surge Current

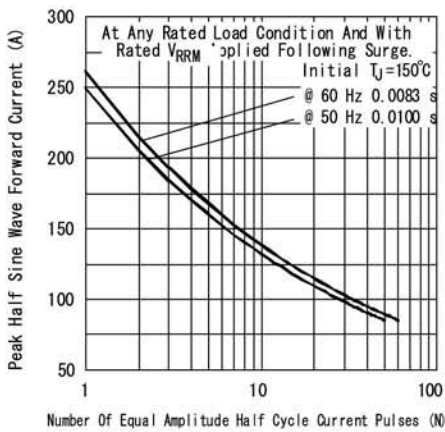


Fig. 6 - Maximum Non-Repetitive Surge Current

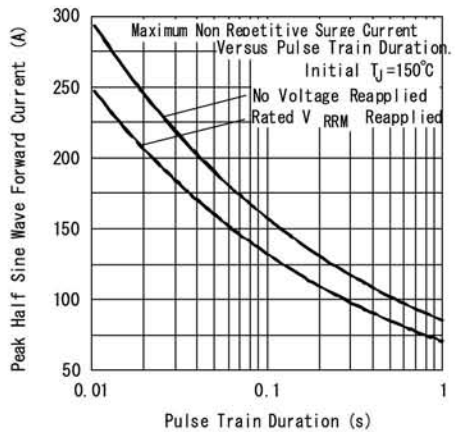


Fig. 7 – Forward Voltage Drop Characteristics

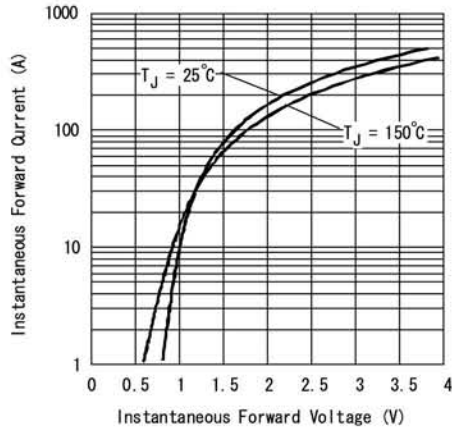


Fig. 8 – Thermal Impedance Z_{thJC} Characteristics

