



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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200HF(R) SERIES

STANDARD RECOVERY DIODES

Stud Version

Features

- High current carrying capability
- High surge current capability
- Types up to 1200V V_{RRM}
- Stud cathode and stud anode version
- Standard JEDEC types
- Diffused junction

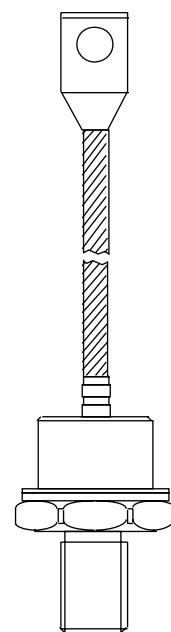
200 A

Typical Applications

- Battery chargers
- Converters
- Power supplies
- Machine tool controls

Major Ratings and Characteristics

Parameters	200HF(R)	Units
$I_{F(AV)}$	200	A
@ T_C	125	°C
$I_{F(RMS)}$	314	A
I_{FSM} @ 50Hz	4400	A
@ 60Hz	4610	A
I^2t @ 50Hz	97	KA ² s
@ 60Hz	88	KA ² s
V_{RRM} range	400 to 1200	V
T_J	-40 to 180	°C



case style
DO-205AC (DO-30)

200HF(R) Series

Bulletin I2020 rev. A 07/94

International
IOR Rectifier

ELECTRICAL SPECIFICATIONS

Voltage Ratings

Type number	Voltage Code	V_{RRM} , maximum repetitive peak reverse voltage V	V_{RSM} , maximum non-repetitive peak rev. voltage V	I_{RRM} max. @ 180°C mA
200HF(R)	40	400	500	15
	80	800	900	
	120	1200	1300	

Forward Conduction

Parameter	200HF(R)	Units	Conditions
$I_{F(AV)}$ Max. average forward current @ Case temperature	200	A	180° conduction, half sine wave
	125	°C	
$I_{F(RMS)}$ Max. RMS forward current	314	A	DC @ 120°C case temperature
I_{FSM} Max. peak, one-cycle forward, non-repetitive surge current	4400	A	t = 10ms No voltage
	4610		t = 8.3ms reapplied
	3700		t = 10ms 100% V_{RRM}
	3870		t = 8.3ms reapplied
I^2t Maximum I^2t for fusing	97	KA ² s	t = 10ms No voltage
	88		t = 8.3ms reapplied
	68		t = 10ms 100% V_{RRM}
	62		t = 8.3ms reapplied
$I^2\sqrt{t}$ Maximum $I^2\sqrt{t}$ for fusing	968	KA ² /s	t = 0.1 to 10ms, no voltage reapplied
$V_{F(TO)1}$ Low level value of threshold voltage	0.85	V	$(16.7\% \times \pi \times I_{F(AV)} < I < \pi \times I_{F(AV)}), T_J = T_J \text{ max.}$
$V_{F(TO)2}$ High level value of threshold voltage	1.04		$(I > \pi \times I_{F(AV)}), T_J = T_J \text{ max.}$
r_{f1} Low level value of forward slope resistance	0.85	mΩ	$(16.7\% \times \pi \times I_{F(AV)} < I < \pi \times I_{F(AV)}), T_J = T_J \text{ max.}$
r_{f2} High level value of forward slope resistance	0.59		$(I > \pi \times I_{F(AV)}), T_J = T_J \text{ max.}$
V_{FM} Max. forward voltage drop	1.45	V	$I_{pk} = 628A, T_J = 25^\circ C$

Thermal and Mechanical Specification

Parameter	200HF(R)	Units	Conditions
T _J Max. operating temperature range	-40 to 180	°C	
T _{stg} Max. storage temperature range	-55 to 180		
R _{thJC} Max. thermal resistance, junction to case	0.17	K/W	DC operation
R _{thCS} Max. thermal resistance, case to heatsink	0.08		Mounting surface, smooth, flat and greased
T Max. allowed mounting torque +0 -20%	11	Nm	Not lubricated threads
	10		Lubricated threads
wt Approximate weight	120	g	
Case style	DO-205AC(DO-30)		See Outline Table

ΔR_{thJC} Conduction

(The following table shows the increment of thermal resistance R_{thJC} when devices operate at different conduction angles than DC)

Conduction angle	Sinusoidal conduction	Rectangular conduction	Units	Conditions
180°	0.045	0.037	K/W	T _J = T _J max.
120°	0.056	0.061		
90°	0.073	0.079		
60°	0.102	0.105		
30°	0.154	0.156		

Ordering Information Table

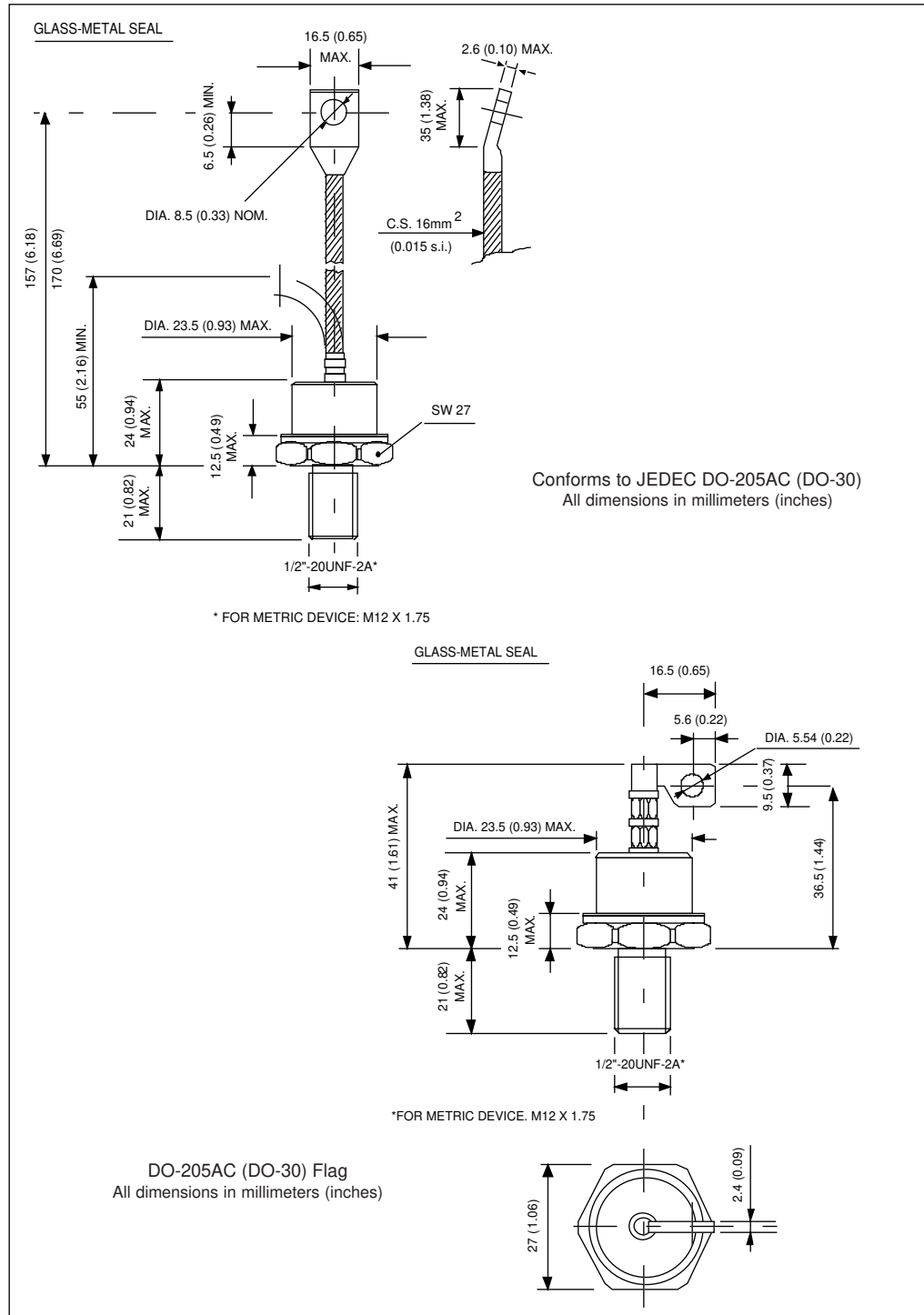
Device Code						
200	HF	R	120	P	B	V
①	②	③	④	⑤	⑥	⑦
1	- Essential Part Number					
2	- Diode					
3	- None = Stud Normal Polarity (Cathode to Stud) R = Stud Reverse Polarity (Anode to Stud)					
4	- Voltage code: Code x 10 = V _{RRM} (See Voltage Ratings table)					
5	- P = Stud base DO-205AC(DO-30) 1/2" 20UNF-2A M = Stud base DO-205AC(DO-30) M12x1.75					
6	- B = Flag top terminals (for Cathode/ Anode Leads) S = Isolated lead with silicone sleeve (Red = Reverse Polarity; Blue = Normal Polarity) None = Not isolated lead					
7	- V = Glass-metal seal					

200HF(R) Series

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International
IR Rectifier

Outline Table



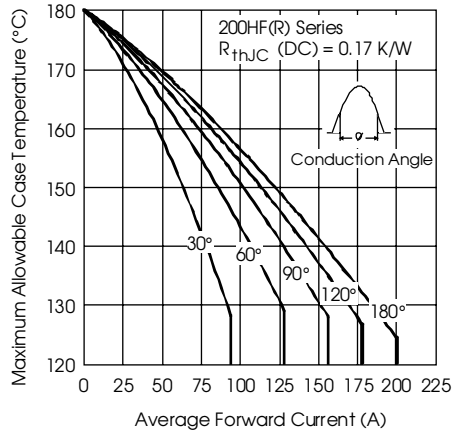


Fig. 1 - Current Ratings Characteristics

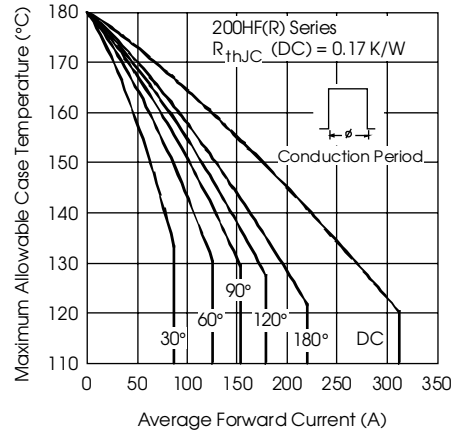


Fig. 2 - Current Ratings Characteristics

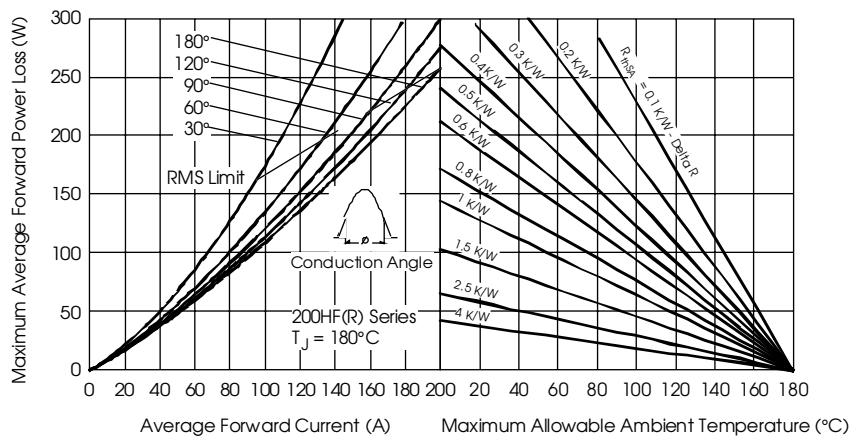


Fig. 3 - Forward Power Loss Characteristics

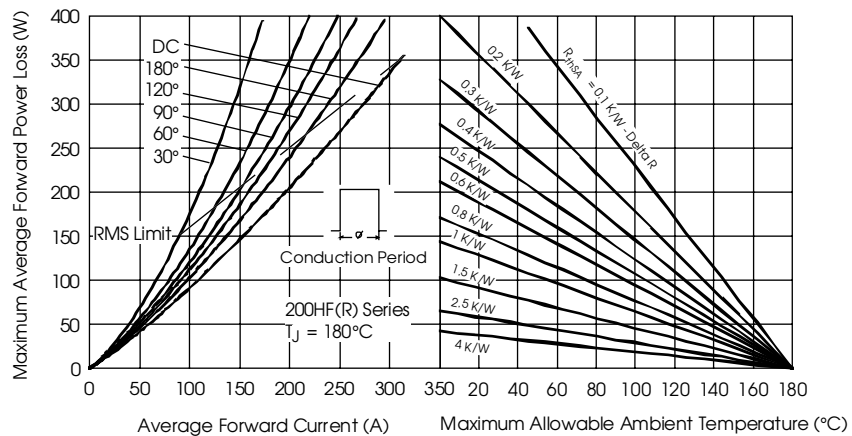


Fig. 4 - Forward Power Loss Characteristics

200HF(R) Series

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International
IRF Rectifier

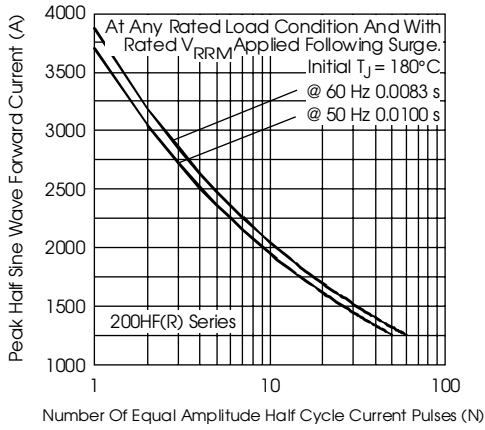


Fig. 5 - Maximum Non-Repetitive Surge Current

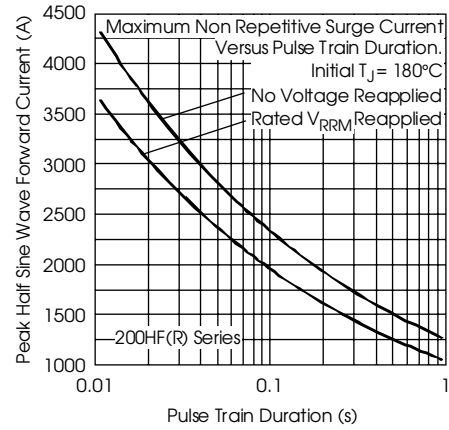


Fig. 6 - Maximum Non-Repetitive Surge Current

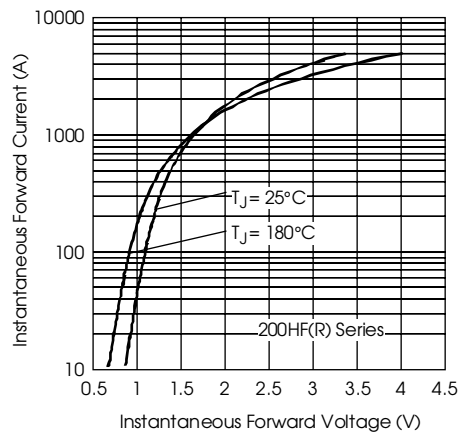


Fig. 7 - Forward Voltage Drop Characteristics

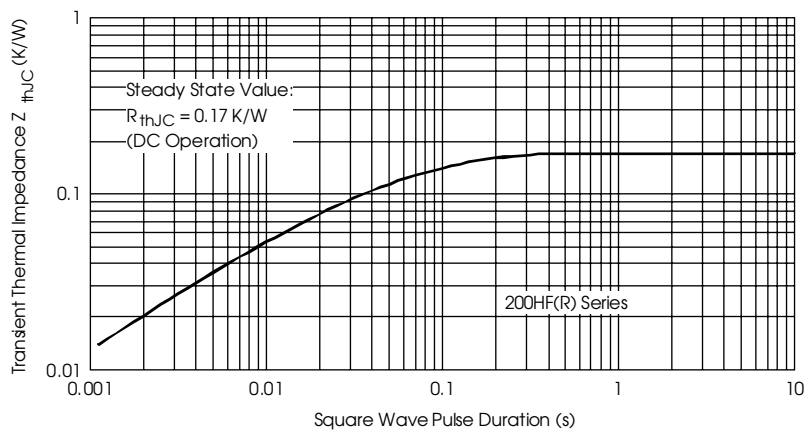


Fig. 8 - Thermal Impedance Z_{thJC} Characteristics