

STANDARD RECOVERY DIODES

Stud Version

Features

- Hermetic metal case with ceramic insulator
- High surge current capabilities
- Stud cathode and stud anode version

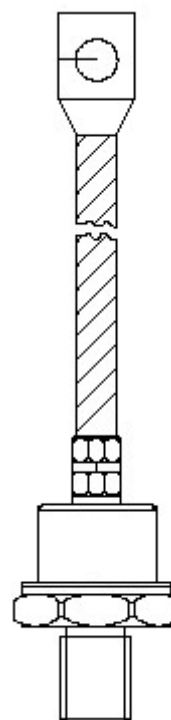
150A

Typical Applications

- Converters
- Power supplies
- Machine tool controls
- High power drives
- Medium traction applications

Major Ratings and Characteristics

Parameters	D150A(K) 1K8VB	Units
$I_{F(AV)}$	150	A
$@ T_{hs}$	140	°C
$I_{F(RMS)}$	240	A
I_{FSM} @ 50Hz	2000	A
@ 60Hz	2090	A
$I^2 t$ @ 50Hz	20000	A ² s
@ 60Hz	18180	A ² s
V_{RRM} range	1800	V
T_J	- 40 to 180	°C



case style

PHD**D150A(K)1K8VB...SERIES****ELECTRICAL SPECIFICATIONS****Voltage Ratings**

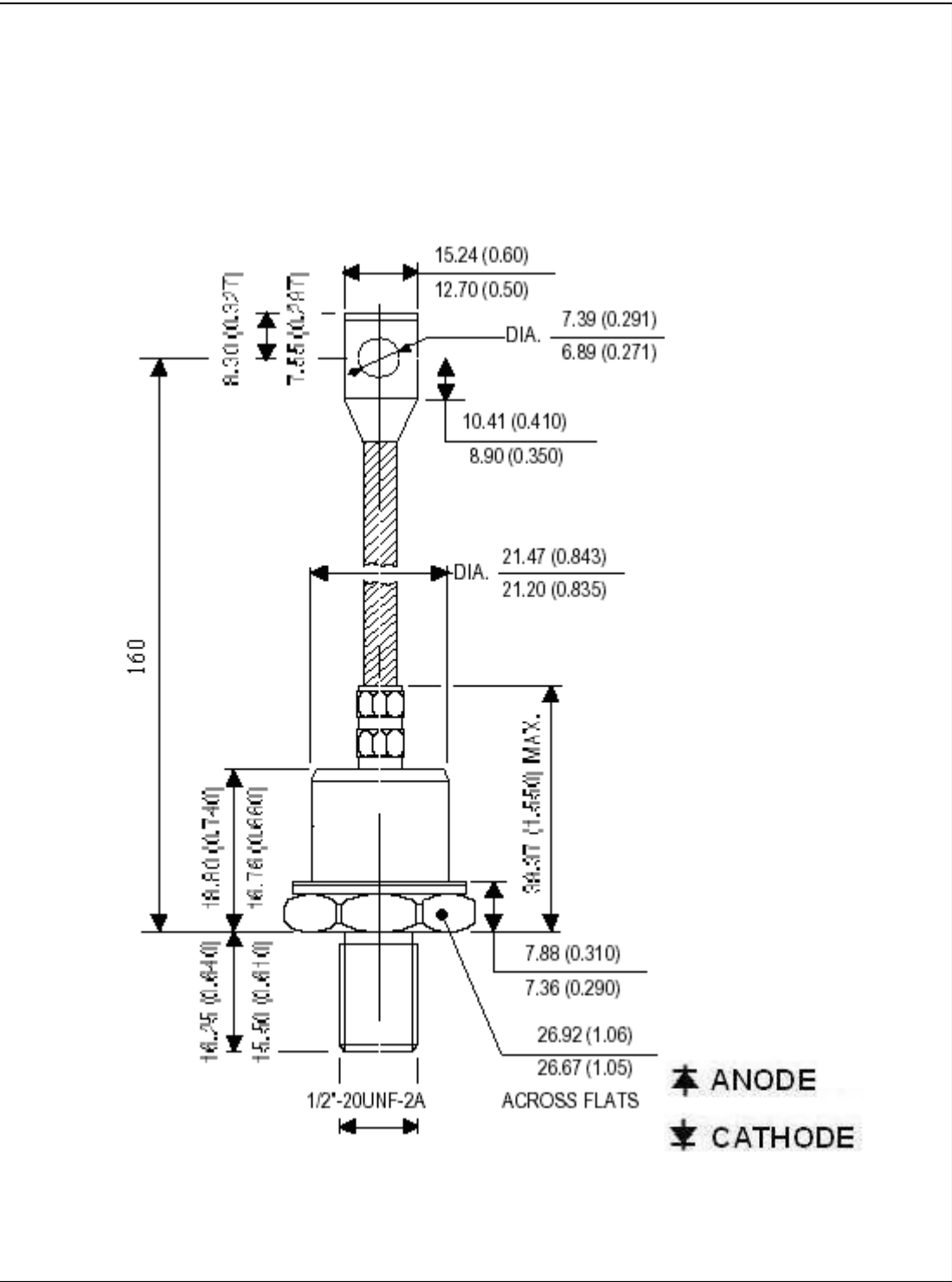
D150A(K)	Voltage Code	V_{RRM} , maximum repetitive peak reverse voltage V	V_{RSM} , maximum non- repetitive peak rev. voltage V	I_{RRM} max. @ $T_J = T_J$ max. mA
	04	400	500	9
	08	800	900	
	12	1200	1300	
	14	1400	1500	
	18	1800	1900	

Forward Conduction

Parameter		D150A(K)	Units	Conditions		
I _{F(AV)}	Max. average forward current	150	A	180° conduction, half sine wave		
	@ Heatsink temperature	140	°C	Double side (single side) cooled		
I _{F(RMS)}	Max.RMS forward current	240	A	DC@110°C case temperature		
I _{FSM} ,	Max. peak, one-cycle forward, non-repetitive surge current	2000	A	t = 10ms	No voltage	Sinusoidal half wave, Initial T _J = 150°C
		2090		t = 8.3ms	reapplied	
		1680		t = 10ms	100% V _{RRM}	
		1760		t = 8.3ms	reapplied	
I ² t	Maximum I ² t for fusing	20000	A ² s	t = 10ms	No voltage	
		18180		t = 8.3ms	reapplied	
		14100		t = 10ms	100% V _{RRM}	
		12800		t = 8.3ms	reapplied	
I ² √ t	Maximum I ² √ t for fusing	200000	A ² √ s	t = 0.1 to 10ms, no voltage reapplied		
V _{TM}	Max. forward voltage drop	1.40	V	I _{pk} = 267A, T _J = 25°C, t _p =400 μ s rectangular wave		
V _{F(TO)}	Low level value of threshold voltage	0.73	V	(16.7% × π × I _{F(AV)} < 1 < π × I _{F(AV)}), T _J =T _J max		
r _f	Low level value of forward slope resistance	0.49	M Ω	(16.7% × π × I _{F(AV)} < 1 < π × I _{F(AV)}), T _J =T _J max		

Thermal and Mechanical Specification

Parameter	D150A(K)	Units	Conditions
T_J Max.junction operating temperature range	-55to 180	°C	
T_{stg} Max. storage temperature range	-55 to 180		
R_{thJC} Max,thermal resistance,junction to case	0.27	K/W	DC operation
R_{thCS} Max. thermal resistance,Case to heatsink	0.25		DC operation single(double) side cooled
T Max.allowed Mounting torque, $\pm 10\%$	7	N	
wt Approximate weight	115	g	



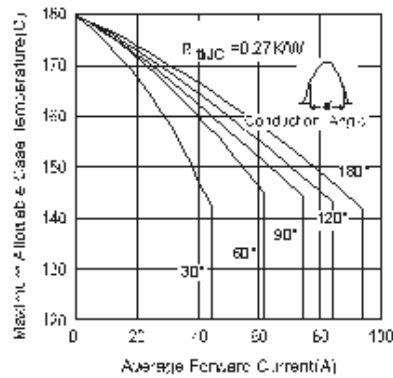


Fig.1-Current Ratings Characteristics

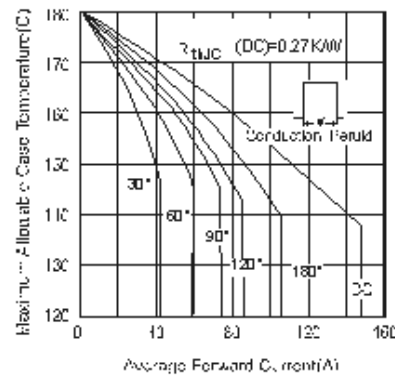


Fig.2-Current Ratings Characteristics

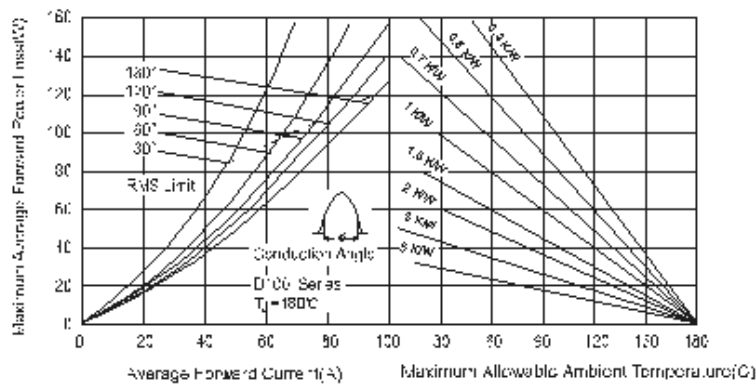


Fig.3-Forward Power Loss Characteristics

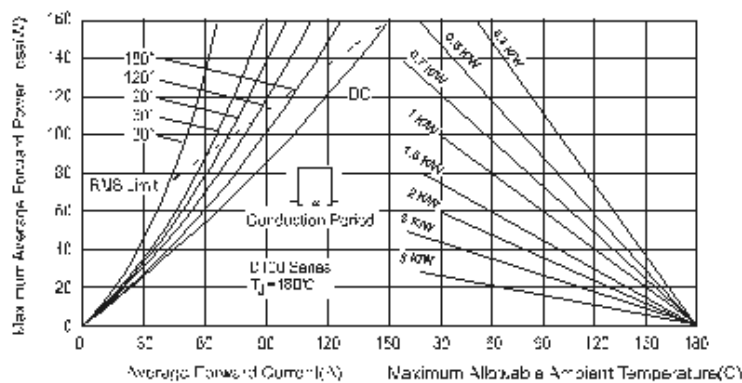


Fig.4-Forward Power Loss Characteristics