

PHD**D16A(K) 1K8VC...SERIES****STANDARD RECOVERY DIODES****Stud Version****Features**

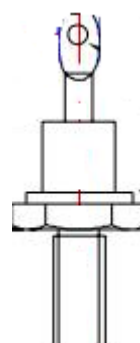
- Hermetic metal case with ceramic insulator
- Capacity of supporting High surge current
- Stud cathode and stud anode version

16A**Typical Applications**

- Converters
- Power supplies
- Machine tool controls

Major Ratings and Characteristics

Parameters		D16A(K) 1K8VC	Units
$I_{F(AV)}$		16	A
	@ T_{hs}	120	°C
$I_{F(RMS)}$		26	A
I_{FSM}	@ 50Hz	356	A
	@ 60Hz	373	A
$I^2 t$	@ 50Hz	636	A ² s
	@ 60Hz	580	A ² s
V_{RRM}	range	1000 to 1200	V
T_J	range	-65 to 175	°C



PHD**D16A(K) 1K8VC...SERIES****ELECTRICAL SPECIFICATIONS****Voltage Ratings**

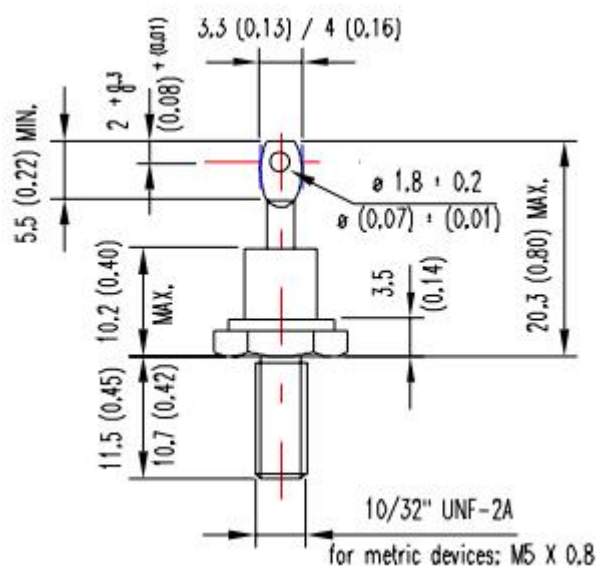
D16A(K)	Voltage	V_{RRM} , maximum repetitive peak reverse voltage	V_{RSM} , maximum non- repetitive peak rev. voltage	I_{RRM} max. @ $T_J = 175^\circ\text{C}$
	Code	V	V	mA
	10	1000	1100	12
	18	1800	1900	

Forward Conduction

Parameter		D16 A(K)	Units	Conditions		
I _{F(AV)}	Max. average forward current @ Heatsink temperature	16	A	180° conduction, half sine wave		
		120	°C	Double side (single side) cooled		
I _{F(RMS)}	Max.RMS forward current	26	A			
I _{FSM} ,	Max. peak, one-cycle forward, non-repetitive surge current	356	A	t = 10ms	No voltage reapplied	Sinusoidal half wave,Initial T _J = T _J max.
		373		t = 8.3ms		
		300		t = 10ms	100% V _{RRM} reapplied	
		314		t = 8.3ms		
I ² t	Maximum I ² t for fusing	636	A ² s	t = 10ms	No voltage reapplied	
		580		t = 8.3ms		
		450		t = 10ms	100% V _{RRM} reapplied	
		410		t = 8.3ms		
I ² √t	Maximum I ² √t for fusing	636 0	A ² √s	t = 0.1 to 10ms, no voltage reapplied		
V _{FM}	Max. forward voltage drop	1.30	V	I _{pk} = 78A, T _J = 25°C, t _p =400 μ s rectangular wave		
V _{F(TO)}	Low level value of threshold voltage	0.8	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	6.8	M Ω	(16.7% × π × I _{F(AV)} <1< π × I _{F(AV)}), T _J =T _J max		

Thermal and Mechanical Specification

Parameter		D16A(K)	Units	Conditions
T_J	Max.junction operating temperature range	-65 to 175	°C	
T_{stg}	Max. storage temperature range	-65 to 200		
R_{thJC}	Max,thermal resistance,junction to case	1.5	K/W	DC operation
R_{thCS}	Max. thermal resistance,Case to heatsink	0.5		Mounting surface,smooth,flatand greased
T	Max.allowed Mounting torque, $\pm 10\%$	7	N	
wt	Approximate weight	11	g	



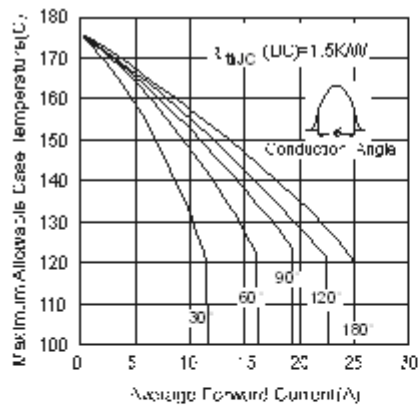


Fig.1-Current Ratings Characteristics

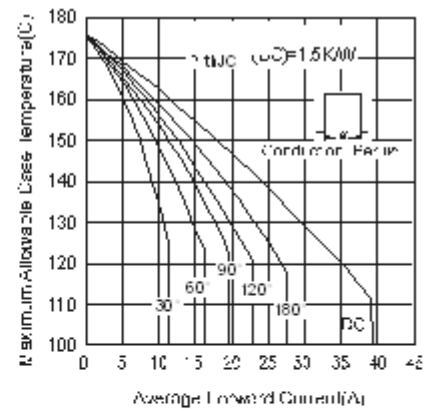


Fig.2-Current Ratings Characteristics

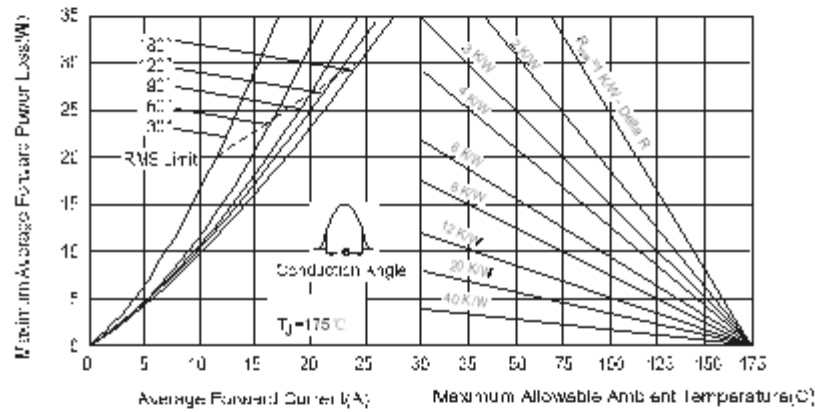


Fig.3-Forward Power Loss Characteristics

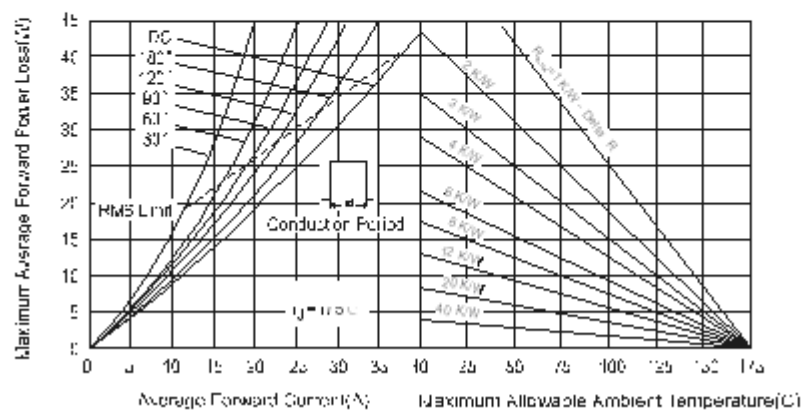


Fig.4-Forward Power Loss Characteristics

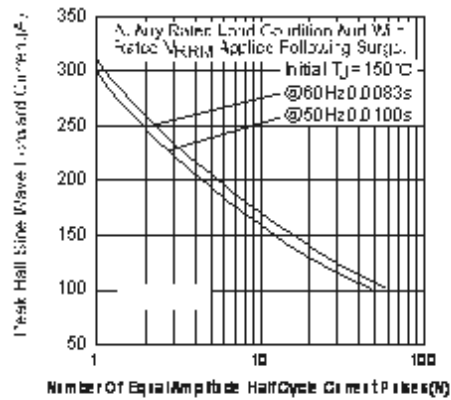


Fig.5-Maximum Non-Repetitive Surge Current

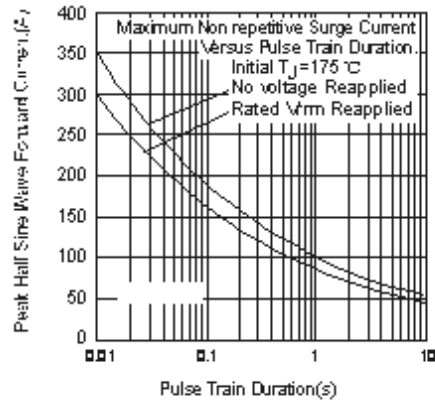


Fig.6-Maximum Non-Repetitive Surge Current

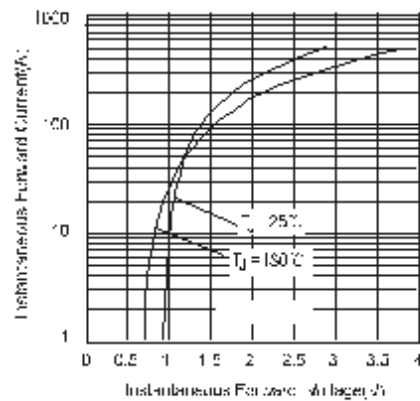


Fig.7-Forward Voltage Drop Characteristics

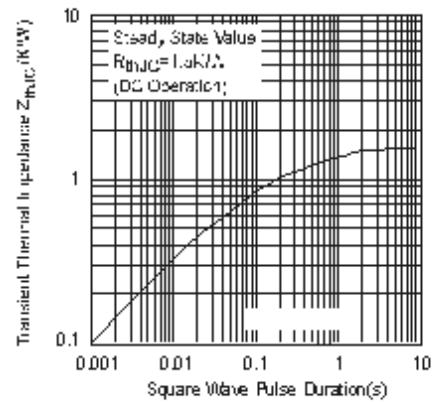


Fig.8-Thermal Impedance Z_{thJC} Characteristics