STANDARD RECOVERY DIODES **Stud Version**

Features

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

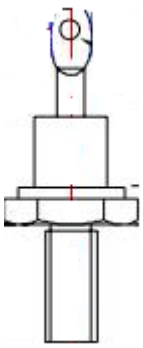
25A

Typical Applications

- Converters
- Power supplies
- Machine tool controls

Major Ratings and Characteristics

Parameters		DA25A(K) 1K6VC	Units
$I_{F(AV)}$		25	A
	@ T_{hs}	120	°C
$I_{F(RMS)}$		40	A
I_{FSM}	@ 50Hz	356	A
	@ 60Hz	373	A
I^2t	@ 50Hz	636	A^2s
	@ 60Hz	580	A^2s
V_{RRM}	range	1600	V
T_J	range	-65 to 175	°C



ELECTRICAL SPECIFICATIONS

Voltage Ratings

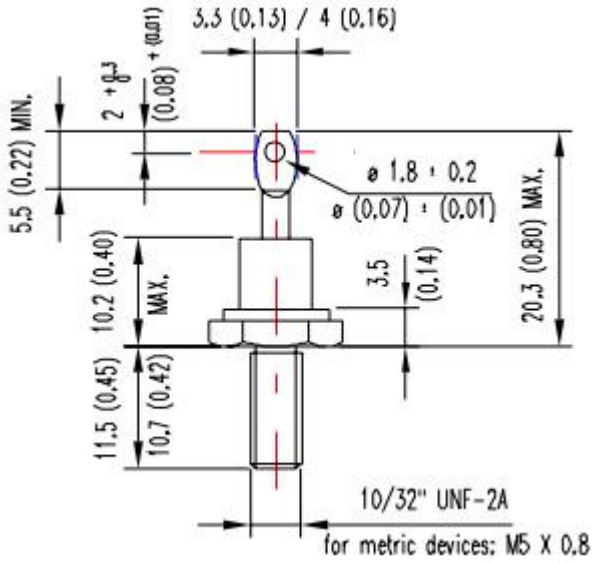
DA25A(K)	Voltage Code	V_{RRM}, maximum repetitive peak reverse voltage V	V_{RSM}, maximum non-repetitive peak rev. voltage V	I_{RRM} max. @ T_J = 175℃ mA
	10	1000	1100	12
	16	1600	1700	

Forward Conduction

Parameter		DA25A(K)	Units	Conditions		
$I_{F(AV)}$	Max. average forward current	25	A	180° conduction, half sine wave		
	@ Heatsink temperature	120	°C	Double side (single side) cooled		
$I_{F(RMS)}$	Max.RMS forward current	40	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^2t	Maximum I^2t for fusing	636	A^2s	t = 10ms	No voltage reapplied	
		580		t = 8.3ms		
		450		t = 10ms	100% V_{RRM} reapplied	
		410		t = 8.3ms		
$I^2\sqrt{t}$	Maximum $I^2\sqrt{t}$ for fusing	6360	$A^2\sqrt{s}$	t = 0.1 to 10ms, no voltage reapplied		
V_{FM}	Max. forward voltage drop	1.00	V	I_{pk} = 78A, T_J = 25°C, t_p=400μs 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	MΩ	(16.7%×π× $I_{F(AV)}$<1<π× $I_{F(AV)}$), T_J=T_J max		

Thermal and Mechanical Specification

	Parameter	DA25A(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, ± 10%	7	N	
wt	Approximate weight	11	g	


5.5 (0.15) / 4 (0.16)
2 +0.3 (0.08) +0.01
5.5 (0.22) MIN.
ø 1.8 ± 0.2
ø (0.07) ± (0.01)
20.3 (0.80) MAX.
10.2 (0.40) MAX.
3.5 (0.14)
11.5 (0.45)
10.7 (0.42)
10/32" UNF-2A
for metric devices: M5 X 0.8

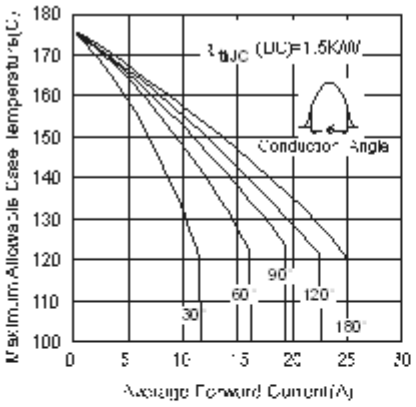


Fig.1-Current Ratings Characteristics

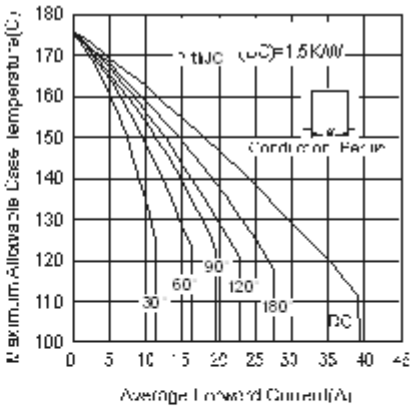


Fig.2-Current Ratings Characteristics

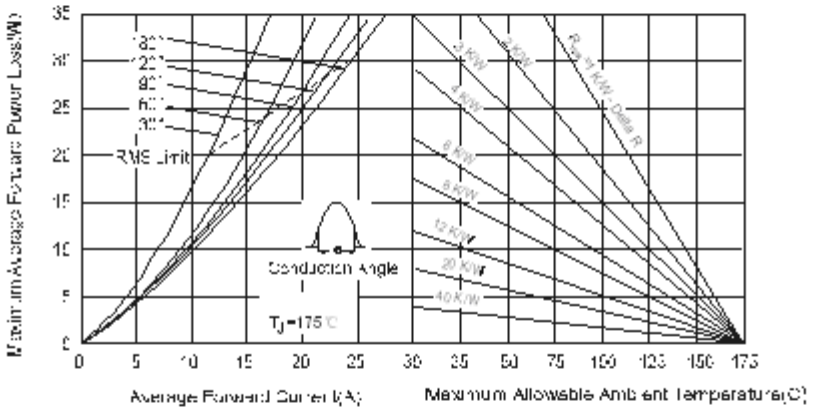


Fig.3-Forward Power Loss Characteristics

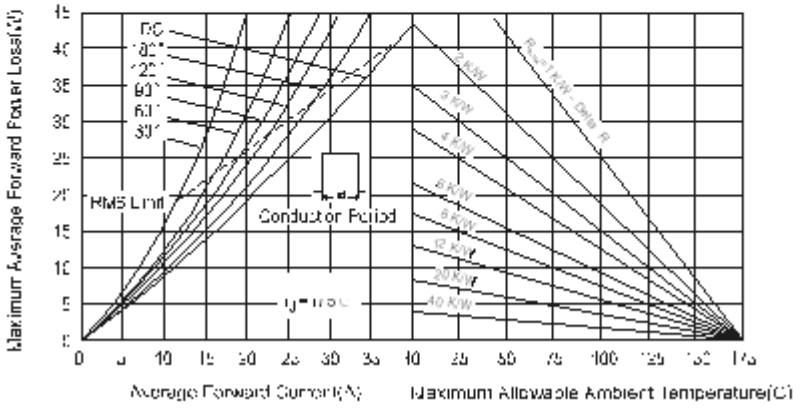


Fig.4-Forward Power Loss Characteristics

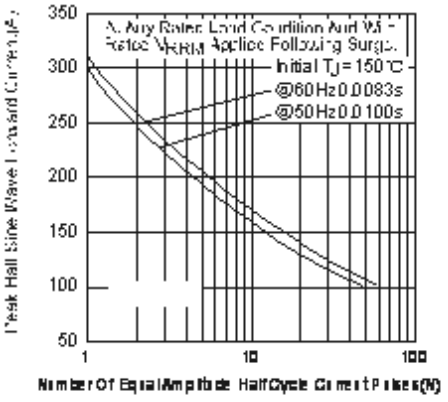


Fig.5-Maximum Non-Repetitive Surge Current

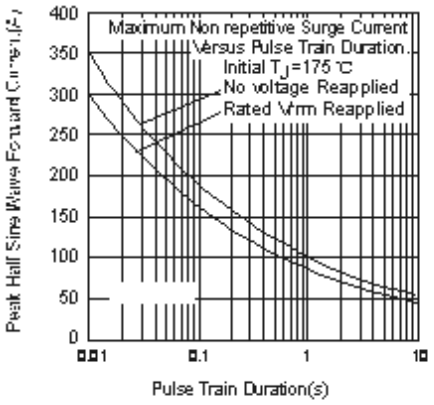


Fig.6-Maximum Non-Repetitive Surge Current

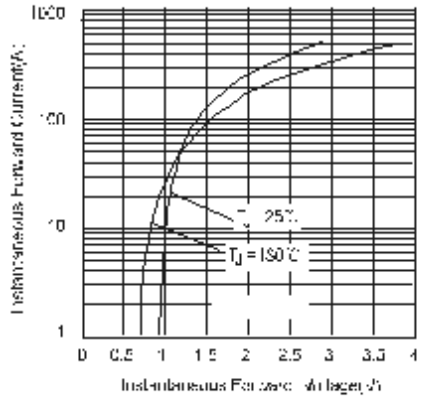


Fig.7-Forward Voltage Drop Characteristics

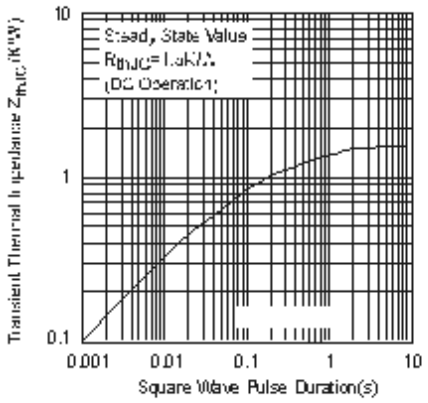


Fig.8-Thermal Impedance Z_{thJC} Characteristics