150K SERIES

100 V – 1600 V
150 A

Features:

- Alloy diode
- High current carrying capability
- High Voltage ratings up to 1600V
- High surge current capabilities
- Stud cathode and stud anode version

ELECTRICAL CHARACTERISTICS AND RATINGS

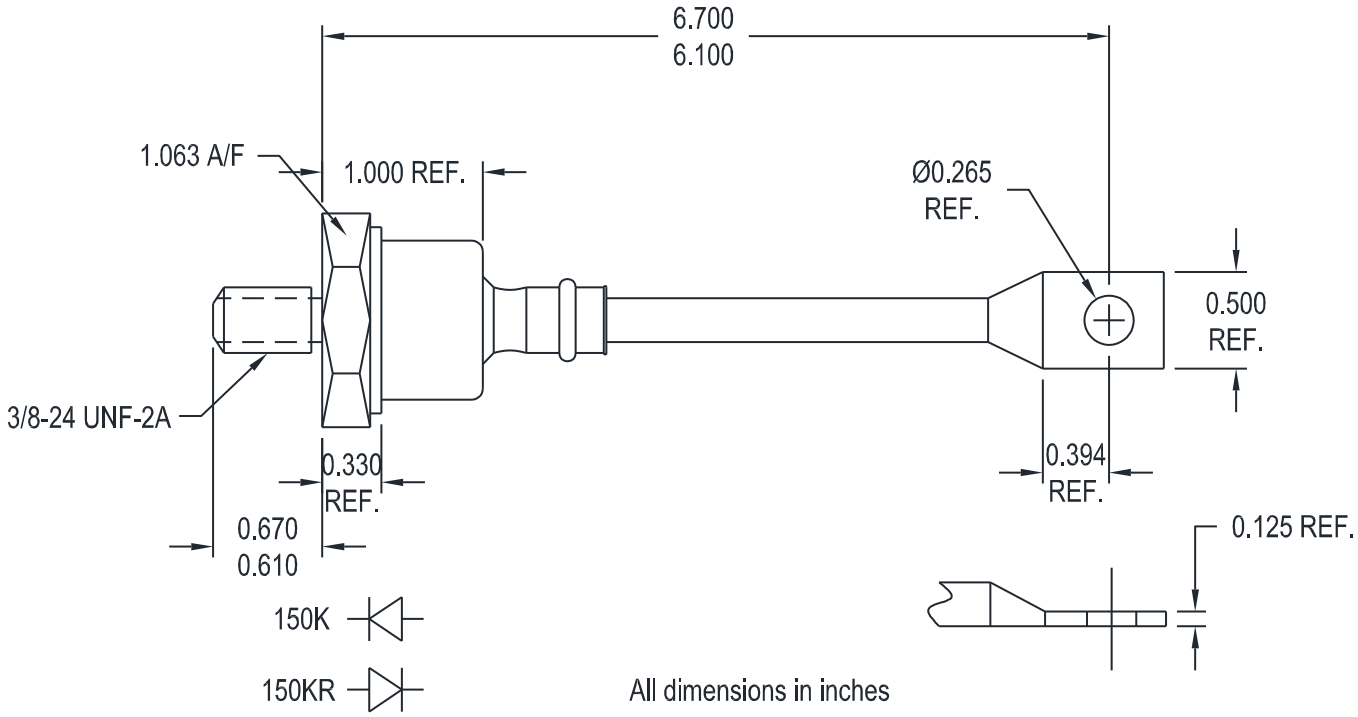
Parameter	Symbol	Value	Units	Conditions
Max. average forward current	$I_{F(AV)}$	150	A	T_C = 130°C
Max. peak forward voltage drop	V_{FM}	1.4	V	Rated $I_{F(peak)}$
Max. peak one cycle non-repetitive surge current	I_{FSM}	3570	A	10msec
Max. repetitive peak forward current	I_{FRM}	750	A	
Max. I^2t rating (non-repetitive) for 10msec	I^2t	64000	A^2sec	

THERMAL AND MECHANICAL SPECIFICATIONS

Parameter	Symbol	Value	Units	Conditions
Max. thermal resistance junction to case	Θ_{J-C}	0.25	°C/W	
Contact thermal resistance	Θ_{C-H}	0.1	°C/W	
Operating junction temperature	T_J	-40 to 200	°C	
Storage temperature	T_{STG}	-40 to 200	°C	
Mounting torque		11.3 Min (100)	Nm (lbf-in)	Non-lubricated threads
Approximate weight	W	150	gm	

Parameter	Symbol	10	20	40	60	80	100	120	140	160
Max. repetitive peak reverse voltage	V_{RRM}	100	200	400	600	800	1000	1200	1400	1600
Max. non-repetitive peak reverse voltage	V_{RSM}	150	300	500	700	900	1100	1300	1500	1700
Max. RMS reverse voltage	$V_{R(RMS)}$	70	140	280	420	560	700	840	980	1120
Max. DC blocking voltage	V_R	100	200	400	600	800	1000	1200	1400	1600
Recommended RMS working voltage		40	80	160	240	320	400	480	560	640
Max. peak reverse leakage current	I_{RM}	15	15	15	12	9	7	7	6	5

CASE OUTLINE AND DIMENSIONS



150	K	R	160
1	2	3	4

1 – 150 = Series Device
2 – K = Standard Diode
3 – None = Normal Polarity
R = Reverse Polarity
4 – Voltage Code x 10 = V_{RRM}

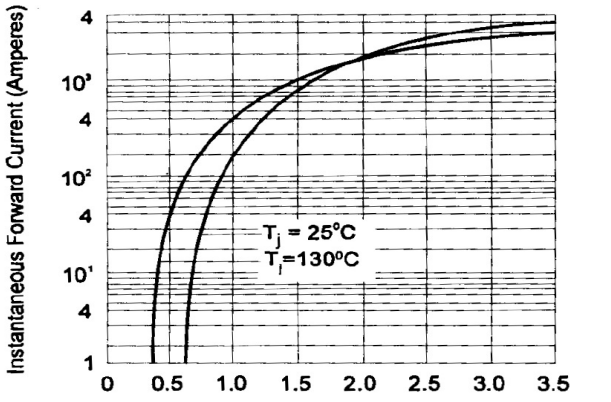


Fig. 1 - Forward Voltage Drop Vs. Forward Current

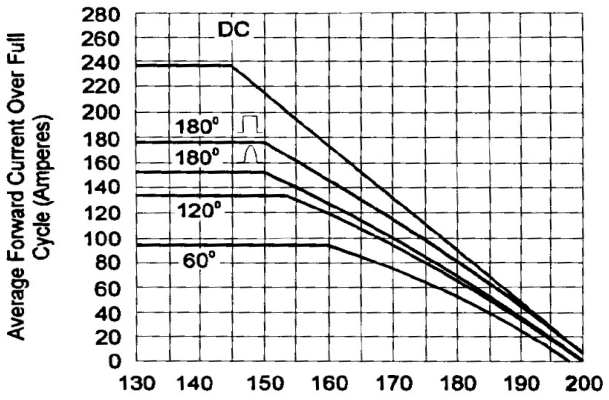


Fig. 2 - Average Forward Current Vs. Case Temperature

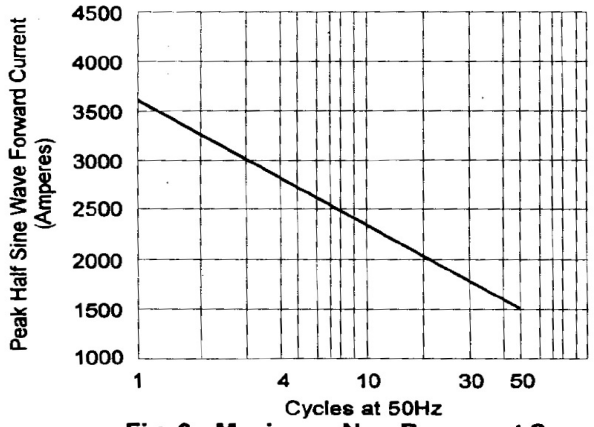


Fig. 3 - Maximum Non Recurrent Surge Current

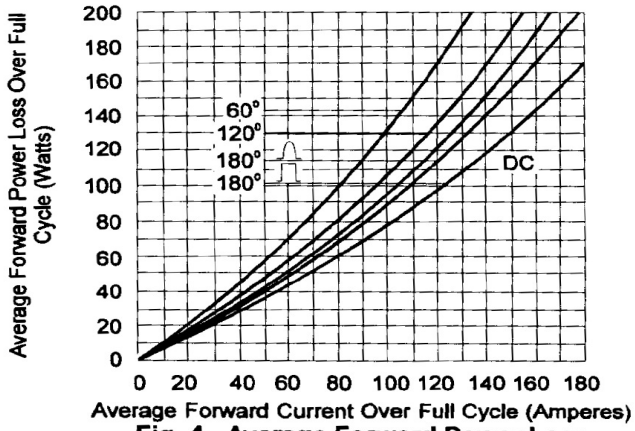


Fig. 4 - Average Forward Power Loss Vs. Low Level Forward Current

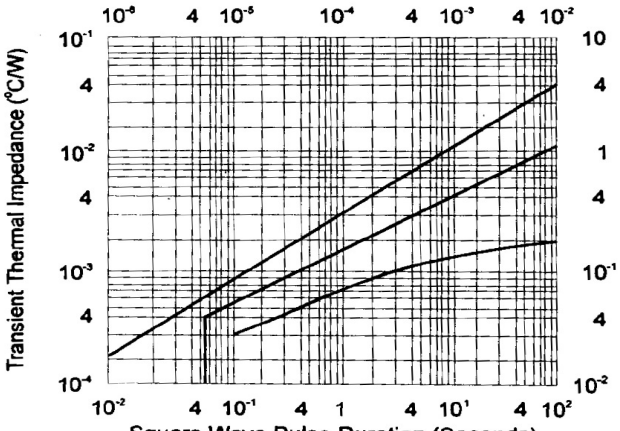


Fig. 5 - Transient Thermal Impedance

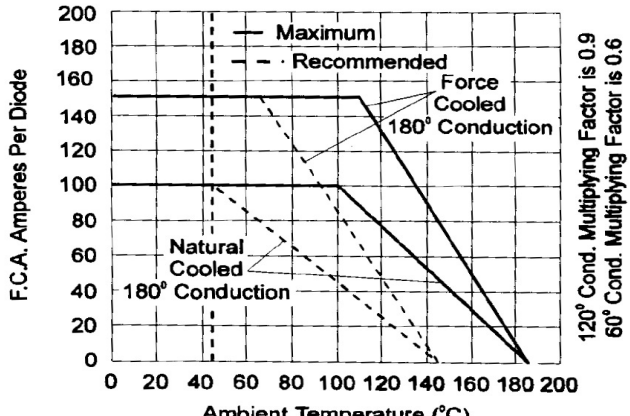


Fig. 6 - Diode 150 L/MR Mounted on Heat Sink Type K5 with θHA-NC 0.55° C/W, FC 0.13°C/W