

D1400B Series (TIS)

Standard recovery Diode

Features

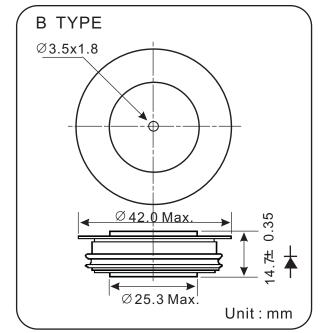
- 1. Voltage rating up to 2400V
- 2. Typical application
 - All-purpose rectifier diodes
 - Industrial high power drives
 - Welders
 - Electrode plating

Ordering code



- (1) stands for disc types diodes
- (2) Maximum average forward $\,$ current , $\,$ A
- (3) peakage style: B
- (4) Voltage code , V (code x 100 = V_{RRM})

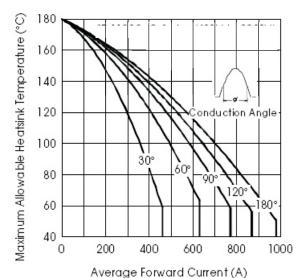
Electrical Characteristics



Symbol	Parameter	Condition	Value	Unit
l _{F(AV)}	Average forward current	180° half sine wave , 50 Hz Double side cooled , T _C =55°C	1400	А
IF(RMS)	R.M.S. Forward current	Double side cooled , T _{hs} =25 °C	2500	Α
V _{RRM}	Repetitive peak reverse voltage	$t_p = 10 \text{ ms } V_{RMS} = V_{RRM} \times 1.1$	400 to 2400	V
I _{RRM}	Repetitive peak reverse current	@ T _j =T _j MAX	15	mA
IFSM	Surge forward current	t=10ms NO voltage reapplied	13100	Α
		t=10ms 100% VRRM reapplied	11000	Α
l² _t	I ² t for fusing coordination	t=10ms NO voltage reapplied	850	KA ² S
		t=10ms 100% V _{RRM} reapplied	600	KA ² S
VF(TO)1	Low level value of threshold voltage	$16.7\% \times \pi \times I_{F(AV)} < 1 < \pi \times I_{F(AV)}, T_{j} = max.$	0.75	V
VF(TO)2	High level value of threshold voltage	$1>\pi xI_{F(AV)}$, $T_j=max$.	0.92	V
r _{f1}	Low level value of forward slope resistance	$16.7\% \times \pi \times F(AV) < 1 < \pi \times F(AV) , T_j = max.$	0.35	mΩ
r _{f2}	High level value of forward slope resistance	$1>\pi \times I_{F(AV)}$, T_j =max.	0.26	mΩ
V _{FM}	Peak on-state voltage	I _{FM} = 3000A ,F=14.7 KN	1.31	V
T _{stg}	Storage temperature range		-55 ~200	°C
Тј	Max.junction operating temperature range		-40 ~180	°C
R _{th(j-h)}	Thermal resistance(junction to heatsink)	Double side cooled (DC)	0.038	°C/W
Wt	Approximate weight		250	g
Fm	Mounting force		9.8	KN



D1400B SERIES



(Single Side Cooled)
Fig. 1 - Current Ratings Characteristics

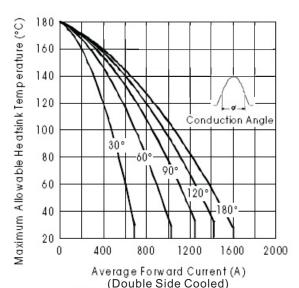
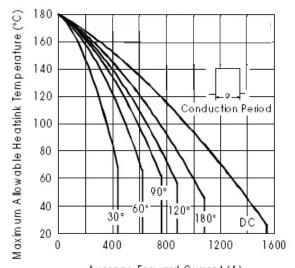


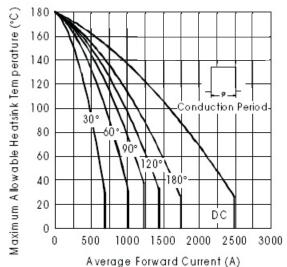
Fig. 3 - Current Ratings Characteristics

3500 Maximum Average Forward PowerLoss (W) 180° 3000 120° 00° 2500 60° 30° RMS Limit 2000 1500 onduction Angle 1000 500 0 0 400 800 1200 1600 Average Forward Current (A)

Fig. 5 - Forward Power Loss Characteristics



Average Forward Current (A) (Single Side Cooled) Fig. 2 - Current Ratings Characteristics



(Double Side Cooled)
Fig. 4 - Current Ratings Characteristics

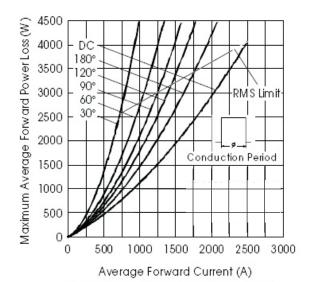


Fig. 6 - Forward Power Loss Characteristics

D1400B SERIES

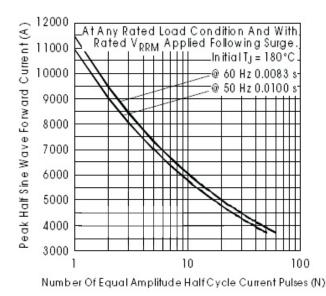


Fig. 7 - Maximum Non-Repetitive Surge Current Single and Double Side Cooled

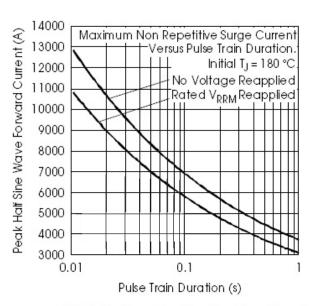


Fig. 8 - Maximum Non-Repetitive Surge Current Single and Double Side Cooled

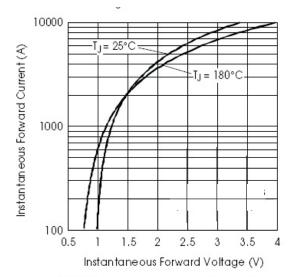


Fig. 9 - Forward Voltage Drop Characteristics

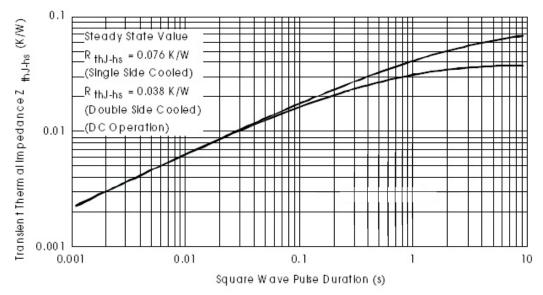


Fig. 10 - Thermal Impedance Z_{thJC} Characteristics