



Glass Passivated Three

Phase Bridge Rectifiers

V_{RRM} 600 to 1600V

I_{FAV} 35 Amp

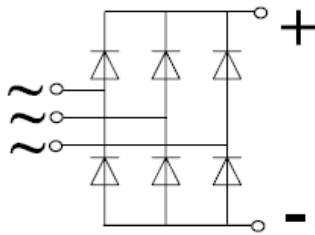
Features

- Heat transfer through aluminum oxide ceramic isolated metal baseplate
- Glass passivated chips
- High surge currents
- Blocking voltage up to 1600V

Applications

- 3-phase rectifiers for power supplies
- Rectifiers for DC motor field supplies
- Input rectifiers for variable frequency drives
- Battery charger rectifiers

Circuit



Module Type

TYPE	V_{RRM}	V_{RSM}
DSD3506	600V	700V
DSD3508	800V	900V
DSD3510	1000V	1100V
DSD3512	1200V	1300V
DSD3514	1400V	1500V
DSD3516	1600V	1700V

Maximum Ratings

Symbol	Item	Conditions	Value	Units
I_O	Average forward output current	$T_c=110^{\circ}\text{C}$	35	A
I_{FSM}	Forward surge current, max	$T=8.3\text{ms}$ Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	400	A
i^2t	Value for fusing	$T=8.3\text{mS}$ $VR=0$	840	A^2s
V_{isol}	Isolation Breakdown Voltage (R.M.S)	a.c.50Hz;r.m.s.;1 min $T_j=25^{\circ}\text{C}$ $T_j=125^{\circ}\text{C}$	3000	V
T_{vj}	Operating Junction Temperature		-55 to +150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature		-55 to +150	$^{\circ}\text{C}$
M_t	Mounting Torque		2	N.m
Weight	Approximately		28	g

Thermal Characteristics

Symbol	Item	Conditions	Value	Units
$R_{th(j-c)}$	Junction to Case	Bridge	0.6	$^{\circ}\text{C}/\text{W}$

Electrical Characteristics

Symbol	Item	Conditions	Value			Units
			Min.	Typ.	Max.	
V_{FM}	Forward Voltage Drop, max	$T=25^{\circ}\text{C}$ $I_F=17.5\text{A}$	-	1.00	1.20	V
I_{RD}	Maximum DC Reverse	$T_{vj}=25^{\circ}\text{C}$ $V_{RD}=V_{RRM}$	-	-	5.0	μA
		$T_{vj}=150^{\circ}\text{C}$ $V_{RD}=V_{RRM}$			2.0	mA

Characteristic Curve

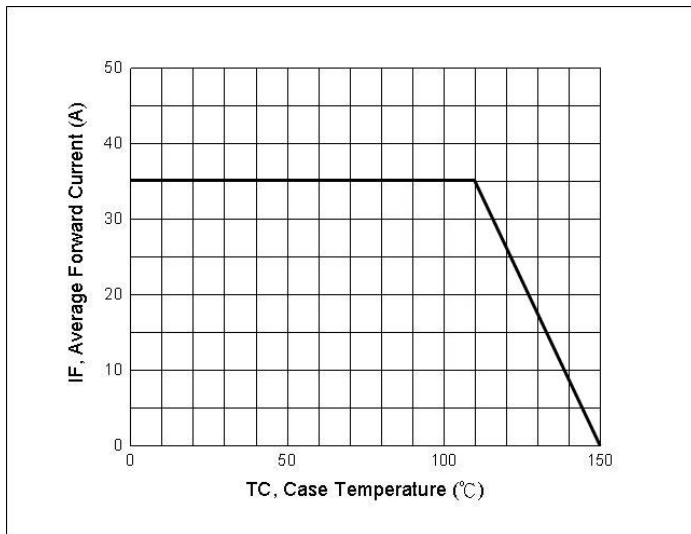


Fig.1 Forward Current Derating Curve

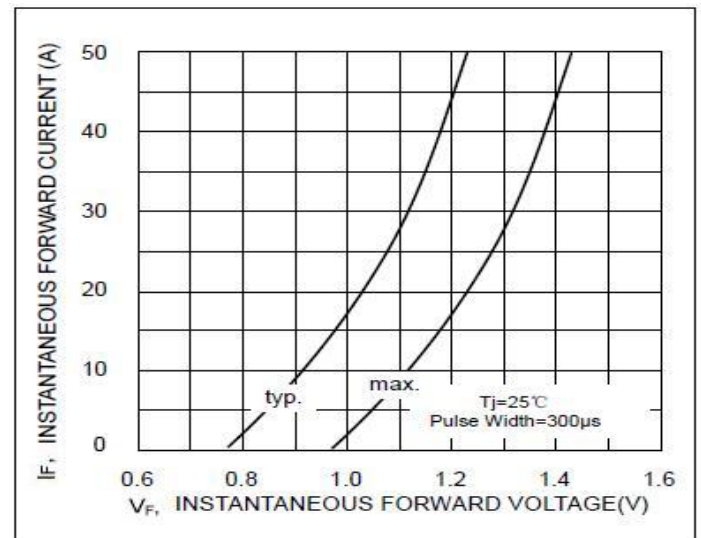


Fig.2 Typical Forward Characteristics

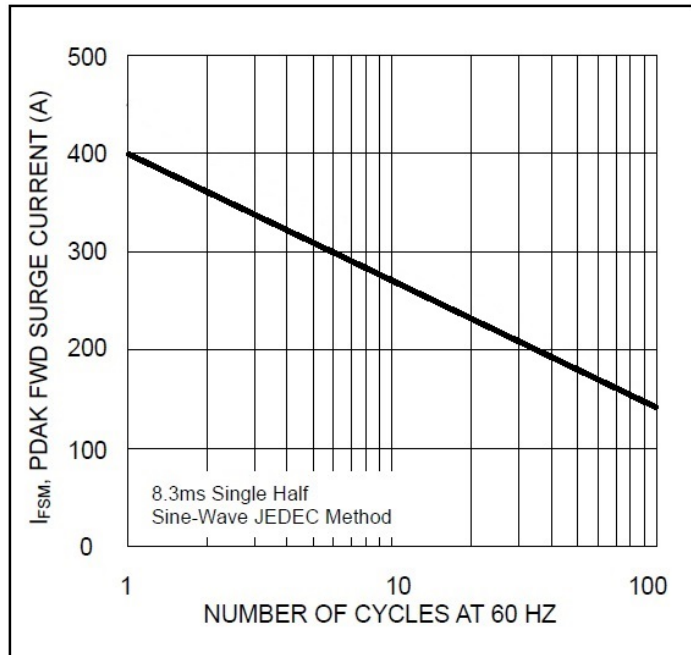


Fig.3 Max Non-Repetitive Peak Surge Current

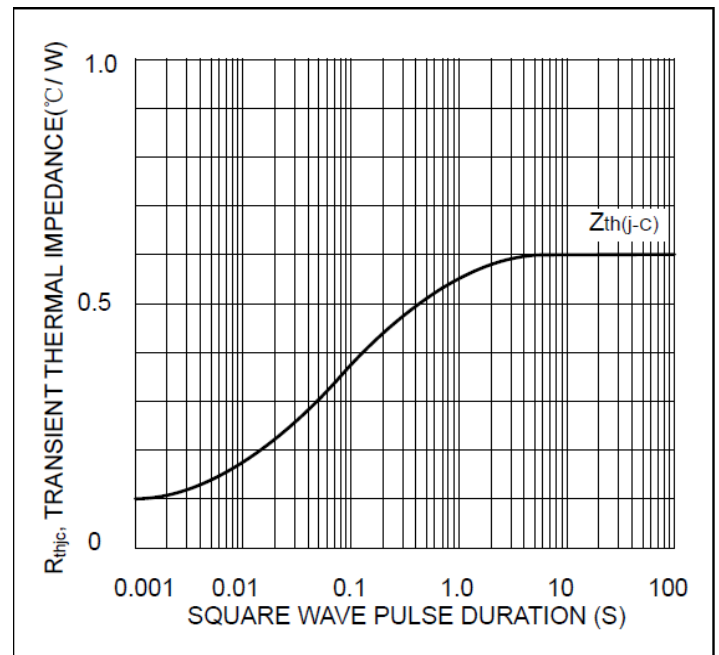
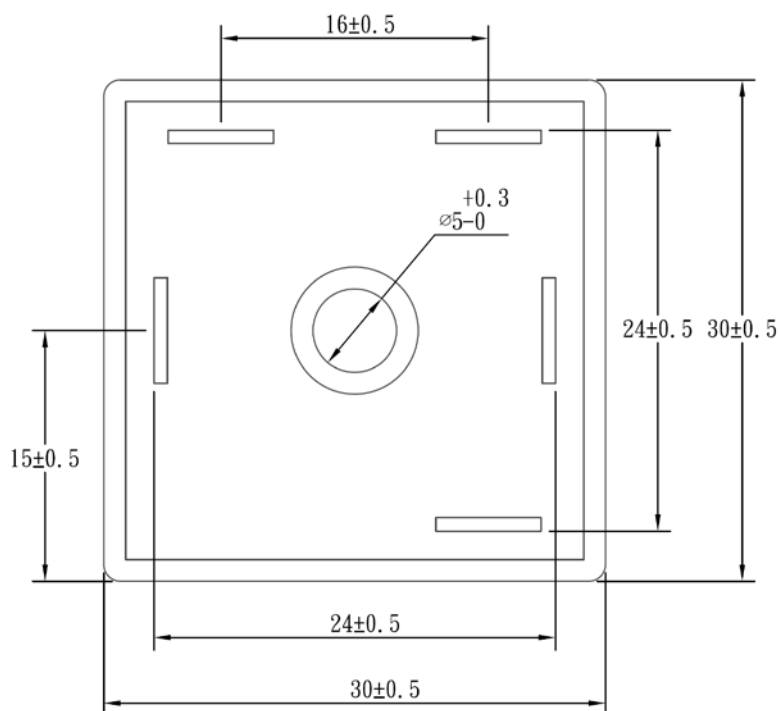


Fig.4 Transient Thermal Impedance

Technical drawing of a mechanical part, likely a bracket or support, showing two views (front and side) and dimensions.

Dimensions:

- Top horizontal dimension: 6.3 ± 0.2
- Right horizontal dimension: 0.8 ± 0.2
- Right vertical dimension (from top surface): 12.9 ± 0.5
- Right vertical dimension (from bottom surface): 9.7 ± 0.5



Dimensions in mm