XI'AN IR-PERI Company

PRELIMINARY

MZS75TP600

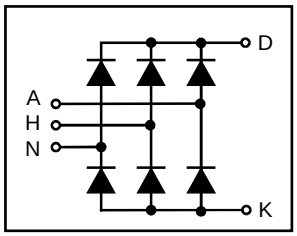
Three Phase Rectifier Bridge

with Fast Recovery Epitaxial Diode(FRED)

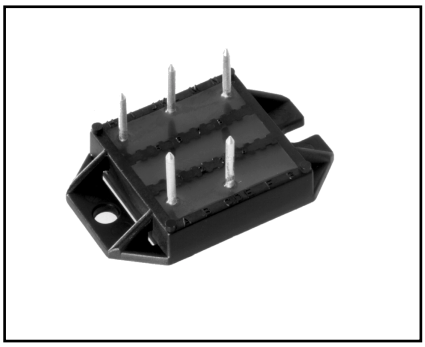
Soft-Fast Speed FRED

Features

- Package with DCB ceramic base plate in low profile
- Isolation voltage 3000 V~
- Planar passivated chips
- Low forward voltage drop
- Leads suitable for PC board soldering
- Space and weight savings
- Improved temperature and power cycling capability
- Small and light weight



V_{RRM} = 600V
I_{FAV} = 75A
trr = 200ns



Benefits

- Supplies for DC power equipment
- Input and output rectifiers for high frequency
- Battery DC power supplies
- Field supply for DC motors

Absolute Maximum Ratings

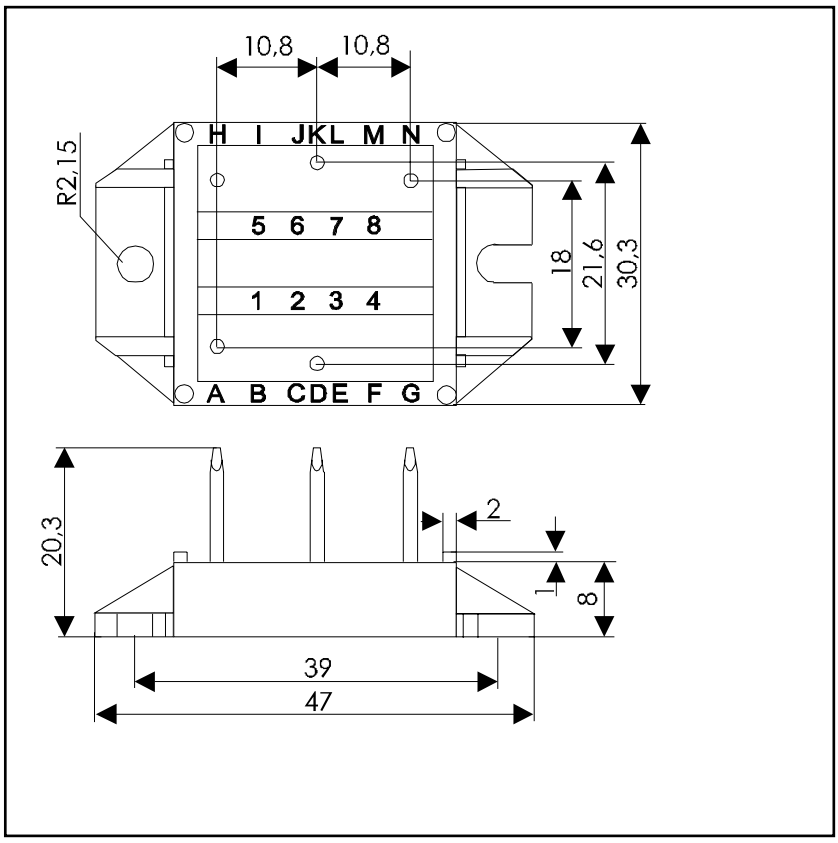
Symbol	Conditions		Maximum	Ratings
V_{RSM}			600	V
V_{RRM}			600	V
I_{dAV} ①	T_C = 100°C, module		86	A
I_{dAVM}			90	A
I_{FSM}	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	250	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	275	A
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz), sine	215	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	235	A
I^2t	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	315	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	320	A^2s
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz), sine	230	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	230	A^2s
T_{VJ}			-40...+150	°C
T_{VJM}			150	°C
T_{stg}			-40...+125	°C
V_{ISOL}	50/60 Hz, RMS	t = 1 min	3000	V~
	$I_{ISOL} \leq$ 1 mA	t = 1 s	3600	V~
M_d	Mounting torque (M4)		1.5-2/14-18	Nm/lb.in.
Weight	typ.		18	g

① for resistive load at bridge output.

Electrical Characteristics (unless otherwise specified)

Symbol	Conditions		Characteristic Values typ.	max.	
I_R	$V_R = V_{RRM}$	T_{VJ} = 25°C		0.1	mA
	$V_R = V_{RRM}$	$T_{VJ} = T_{VJM}$		0.6	mA
V_F	I_F = 30 A	T_{VJ} = 25°C		1.57	V
V_{T0}	for power-loss calculations only			0.98	V
r_T				8	mΩ
R_{thJC}	per diode; DC current			0.9	K/W
R_{thCH}	per diode, DC current, typ.			0.3	K/W
I_{RM}	I_F = 50 A, -diF/dt = 100 A/µs V_R = 100 V, L = 0.05 mH, T_{VJ} = 100°C		6	tbd	A
t_{rr}	I_F = 1 A; -di/dt = 200 A/µs; V_R = 30 V, T_{VJ} = 25°C		35	tbd	ns
a	Max. allowable acceleration			50	m/s^2
d_S	creeping distance on surface			11.2	mm
d_A	creepage distance in air			9.7	mm

Case Outline - TP-pak



Dimensions are shown in millimeters