

P/N: YZPST-MEO450-12DA

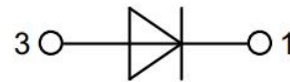
PRODUCT FEATURES

- Fast recovery epitaxial diode
- Soft Recovery behaviour
- Planar passivated chips
- Short recovery time
- Low Switching losses
- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching
- Low losses



APPLICATIONS

- Anti-Parallel diode for high frequency switching devices
- Free wheeling diode in converters
And motor control circuits
- Uninterruptible Power Supply (UPS)
- Induction heating and melting
- Ultrasonic cleaners and welders



ABSOLUTE MAXIMUM RATINGS

$T_C=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Test Conditions	Values	Unit
V_R	Maximum D.C. Reverse Voltage		1200	V
V_{RRM}	Maximum Repetitive Reverse Voltage		1200	V
$I_{F(AV)}$	Average Forward Current	$T_J=150^{\circ}\text{C}$	453	A
$I_{F(RMS)}$	RMS Forward Current	$T_J=75^{\circ}\text{C}$	640	A
I_{FSM}	max Surge Forward Current	$t = 10\text{ms (50Hz),sine, } T_J=45^{\circ}\text{C}$	4800	A
		$t = 8.3\text{ms (60Hz),sine, } T_J=45^{\circ}\text{C}$	5280	
		$t = 10\text{ms (50Hz),sine, } T_J=150^{\circ}\text{C}$	4320	
		$t = 8.3\text{ms (60Hz),sine, } T_J=150^{\circ}\text{C}$	4750	
I_t^2	I_t^2 value for fusing	$t = 10\text{ms (50Hz),sine, } T_J=45^{\circ}\text{C}$	115.2	kA^2s
		$t = 8.3\text{ms (60Hz),sine, } T_J=45^{\circ}\text{C}$	117.1	
		$t = 10\text{ms (50Hz),sine, } T_J=150^{\circ}\text{C}$	93.3	
		$t = 8.3\text{ms (60Hz),sine, } T_J=150^{\circ}\text{C}$	94.8	
V_{TO}	Threshold voltage	$T_J=150^{\circ}\text{C}$	1.16	V
r_T	Slope resistance	$T_J=150^{\circ}\text{C}$	1.15	$\text{m}\Omega$
P_{tot}	Total power dissipation	$T_J=25^{\circ}\text{C}$	1750	W
T_J	Junction Temperature		-40 to +150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range		-40 to +125	$^{\circ}\text{C}$

Visol	Insulation Test Voltage	AC, t=1min	2500	V
Torque	Module-to-Sink	Recommended (M6)	3~5	N·m
	Module Electrodes	Recommended (M6)	3~5	N·m
R _{θJC}	Thermal Resistance	Junction-to-Case	0.071	°C /W

ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I _R	Reverse Leakage Current	V _R =1200V, T _J =25°C				24	mA
		V _R =960V, T _J =25°C				6	mA
		V _R =960V, T _J =125°C				120	mA
V _F	Forward Voltage	I _F =300A, T _J =25°C				1.78	V
		I _F =300A, T _J =125°C				1.51	V
		I _F =520A, T _J =25°C				1.96	V
		I _F =520A, T _J =125°C				1.76	V
t _{rr}	Reverse Recovery Time	I _F =450A, 8di _r /dt=800A/μs	T _J =25°C		250	300	ns
			T _J =100°C		500	600	
I _{RM}	Typical reverse recovery current	V _R =600V, L<=0.05uH	T _J =25°C		80	100	A
			T _J =100°C		125	150	

