

## FAST Rectifier——YZPST-M2639ZC420

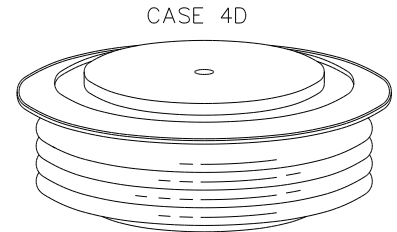
### GENERAL PURPOSE HIGH POWER FAST RECTIFIER

#### Features:

- . All Diffused Structure
- . High Surge rating
- . Soft Reverse Recovery
- . Rugged Ceramic Hermetic Package
- . Pressure Assembled Device

#### Typical Applications:

- . Rectifier for Drives Applications
- . Medium voltage converters
- . Pulsed power applications
- . Crowbar Applications



### ELECTRICAL CHARACTERISTICS AND RATINGS

#### Reverse Blocking

$V_{RRM}$ (1)	$V_{RSM}$ (1)
4200	4200

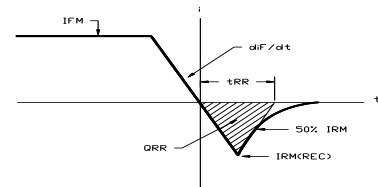
$V_{RRM}$  = Repetitive peak reverse voltage

$V_{RSM}$  = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage	$I_{RRM}$	20 mA 150 mA
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Notes:

All ratings are specified for  $T_j=25^\circ\text{C}$  unless otherwise stated.



REVERSE RECOVERY CHARACTERISTIC

#### Conducting - on state

Parameter	Symbol	Min	Max.	Typ	Units	Conditions
Max. Average value of on-state current	$I_{F(AV)M}$		2639		A	Sinewave, 180° conduction, $T_c=55^\circ\text{C}$
RMS value of on-state current	$I_{FRMS}$		4922		A	Nominal value
Peak one cycle surge (non repetitive) current	$I_{FSM}$		27.5		kA	$T_j=150^\circ\text{C}$ , $V_R=0.8V_{RRM}$ , $t_p=10\text{ms}$
I square t	$I^2t$		$3.79 \times 10^3$		$\text{kA}^2\text{s}$	10 msec
Peak on-state voltage	$V_{FM}$		2.25		V	$I_{FM}=3000\text{A}$ ; $T_j=150^\circ\text{C}$
Threshold voltage	$V_{FO}$		1.38			$T_j=150^\circ\text{C}$
Forward slope resistance	$r_F$		0.29		$\text{m}\Omega$	$T_j=150^\circ\text{C}$
Reverse Recovery Current (4)	$I_{RM(REC)}$		-	280	A	$I_{FM}=1000\text{A}$ ; $dI_F/dt=60\text{A}/\mu\text{s}$ , $T_j=150^\circ\text{C}$
Reverse Recovery Charge (4)	$Q_{rr}$		-	2300	$\mu\text{C}$	
Reverse Recovery Time (4)	$t_{RR}$		-	8.5	$\mu\text{s}$	

\* For guaranteed maximum values, contact factory

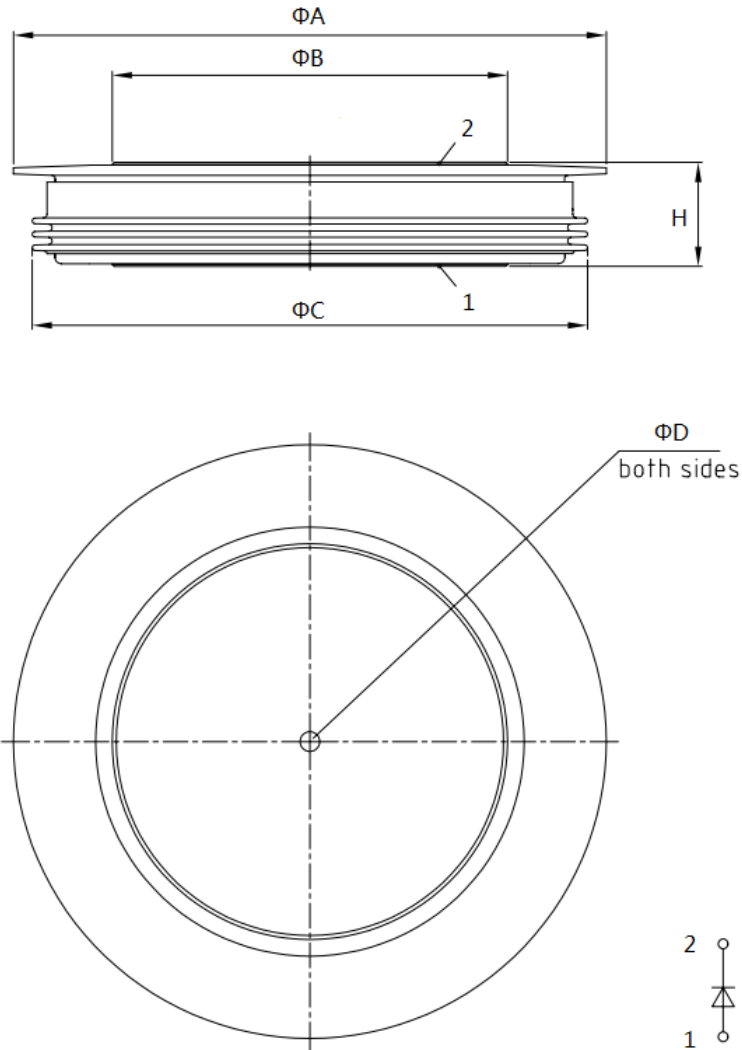
### THERMAL AND MECHANICAL CHARACTERISTICS

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	$T_j$	-40	+150		$^\circ\text{C}$	
Storage temperature	$T_{stg}$	-40	+150		$^\circ\text{C}$	

Thermal resistance - junction to case	$R_{\theta(j-c)}$		0.011		$\kappa/W$	Double sided cooled Single sided cooled
Thermal resistance - case to sink	$R_{\theta(c-s)}$		0,022		$\kappa/W$	Double sided cooled Single sided cooled
Mounting force	P	37	47	-	kN	
Weight	W			1700	g	About

\* Mounting surfaces smooth, flat and greased

**CASE OUTLINE AND DIMENSIONS**



Sym	A	B	C	D	H
mm	109	73	98	3.5x3	36±1

