



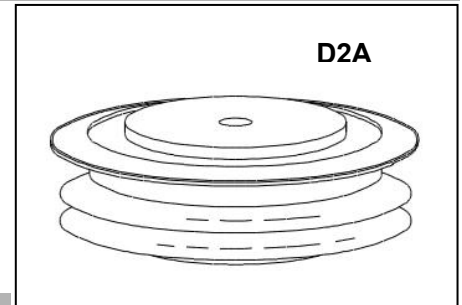
ZK440- FAST RECOVERY DIODE

2400-3000V_{RRM}

FAST RECOVERY RECTIFIER DIODE

Features:

- . All diffused structure
- . High surge rating
- . Blocking capability up to 3000 volts
- . Soft recovery
- . Ceramic housing hermetic package
- . Pressure assembled device



ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

Device Type	V _{RRM} (1)	V _{RSM} (1)
ZK440-24	2400	2500
ZK440-26	2600	2700
ZK440-28	2800	2900
ZK440-30	3000	3100

V_{RRM} = Repetitive peak reverse voltage

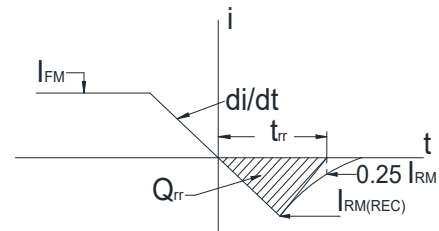
V_{RSM} = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage current	I _{RRM}	10 mA 15 mA (3)
---	------------------	--------------------

Notes:

All ratings are specified for T_j=25 °C, unless otherwise stated

- (1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range -40°C to +125 °C.
- (2) 10 msec. max. pulse width
- (3) Maximum value for T_j = 125 °C.
- (4) See parameter definition below :



reverse recovery characteristic

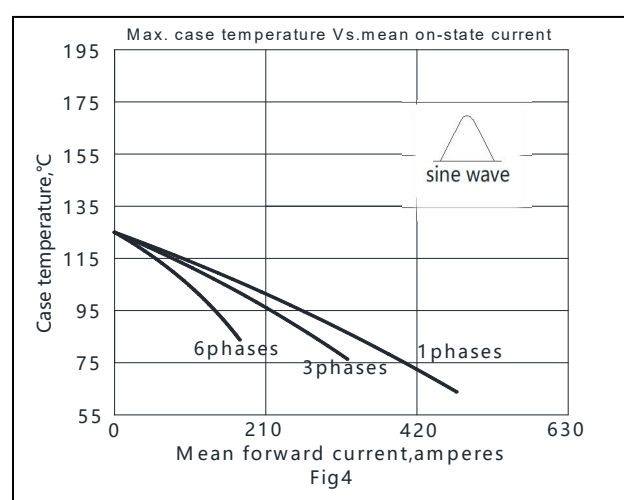
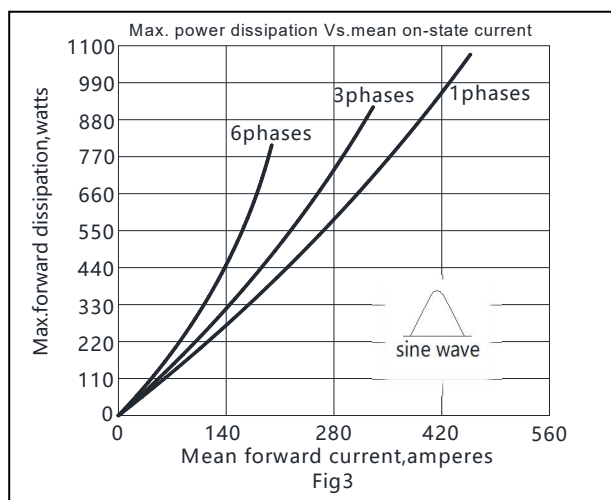
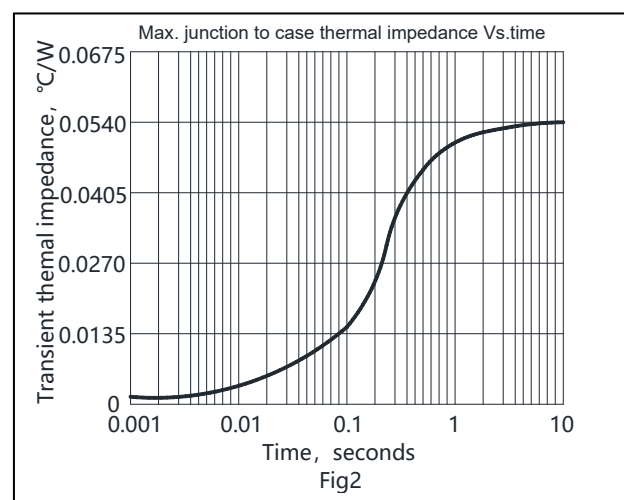
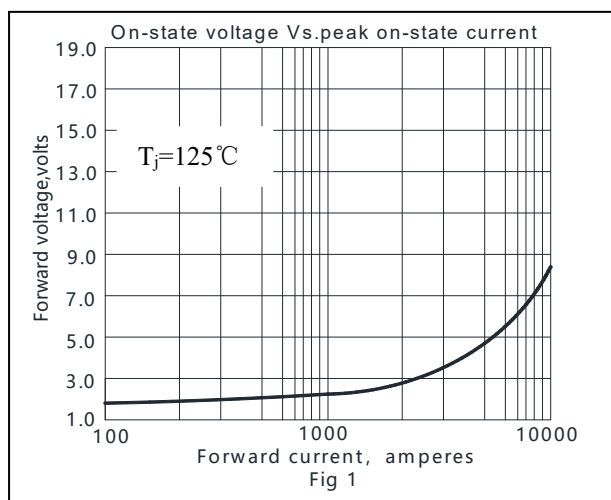
Conducting - on state

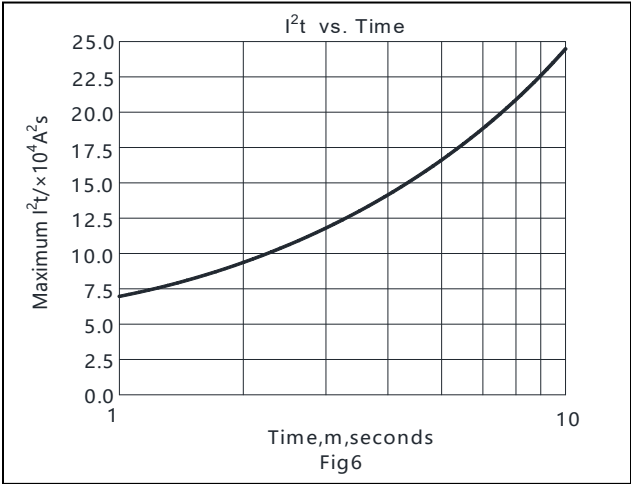
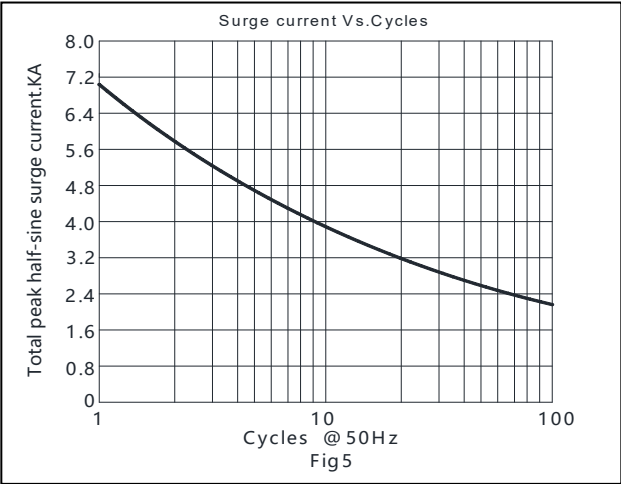
Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average forward current	I _{F(AV)}		440		A	Sinewave 180°, T _c =70°C
RMS forward current	I _{FRMS}		691		A	
Peak one cycle surge (non repetitive) current	I _{FSM}		7040		A	10 msec (50Hz), sinusoidal wave-shape, 180° conduction, T _j =125°C
I square t	I ² t		24.7 × 10 ⁴		A ² s	8.3 msec and 10.0 msec
Peak forward voltage	V _{FM}		2.40		V	I _{FM} = 1200A; Duty cycle ≤ 0.01%
Threshold voltage	V _{FO}		1.55		V	T _j =125°C, I=0.5 π I _{F(AV)} to 1.5 π I _{F(AV)}
Slope resistance	r _F		0.7		mΩ	T _j =125°C, I=0.5 π I _{F(AV)} to 1.5 π I _{F(AV)}
Reverse Recovery Current (4)	I _{RM(REC)}		*		A	I _{FM} = 1000 A; dI _F /dt = 10 A/μs; T _j max
Reverse Recovery Charge (4)	Q _{rr}		*		μC	I _{FM} = 1000 A; dI _F /dt = 10 A/μs; T _j max
Reverse Recovery Time (4)	t _{rr}		6		μs	I _{FM} = 1000 A; dI _F /dt = 10 A/μs; T _j max

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+125		°C	
Storage temperature	T_{stg}	-40	+140		°C	
Thermal resistance - junction to case	$R_{\theta(j-c)}$		0.055		°C/W	Double sided cooled
Thermal resistance - junction to case	$R_{\theta(j-c)}$		0.110		°C/W	Single sided cooled
Thermal resistance - case to heatsink	$R_{\theta(c-s)}$		0.010 0.020		°C/W	Double sided cooled * Single sided cooled *
Mounting force	F			10	kN	
Weight	m			0.08	kg.	

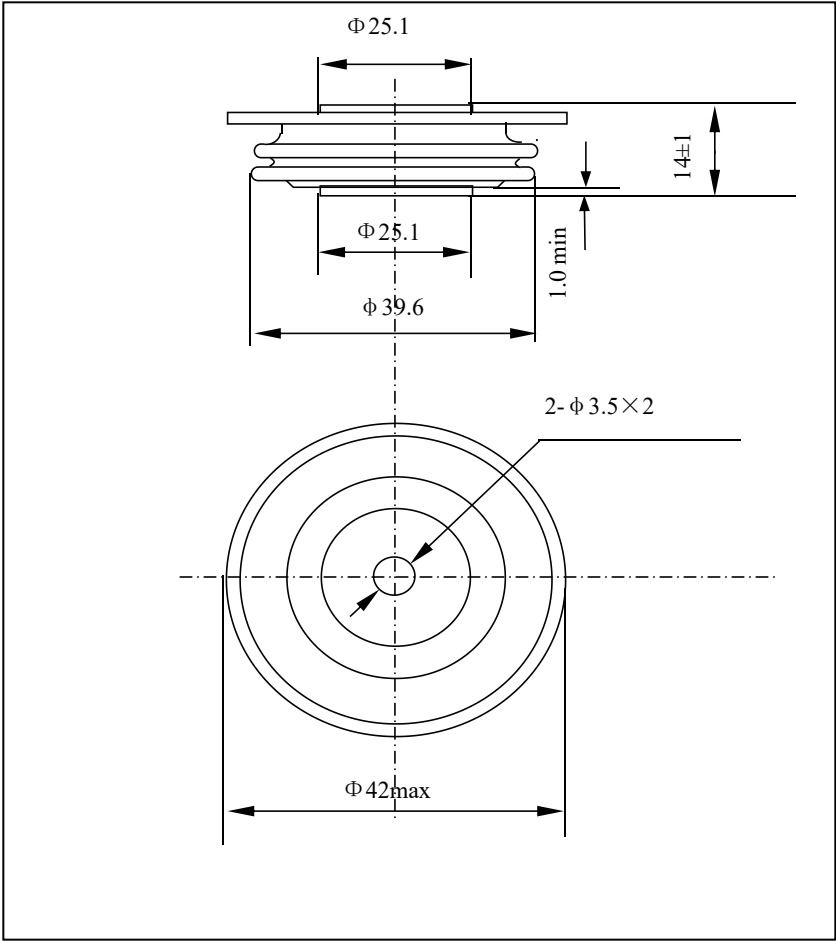
* Mounting surfaces smooth, flat and greaseless

Graph





CASE OUTLINE AND DIMENSIONS



The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function, or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <http://www.21yangjie.com> , or consult your nearest Yangjie's sales office for further assistance.