

SUPER FAST RECTIFIER DPAK SURFACE MOUNT POWER PACKAGE

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer ,computer and telecommunication.

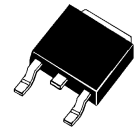
Features

- Low power loss
- Super-fast recovery time for high efficiency
- Glass passivated chip junction
- High forward surge capability
- Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- In compliance with EU RoHs directives



**ULTRA FAST
RECTIFIERS**

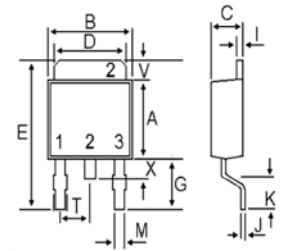
**4AMPERES
200-600 VOLTS**



TO-252AA

MAXIMUM RATINGS (Ta=25°C Unless otherwise specified)

Characteristic	Symbol	MURD420	MURD440	MURD460	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	200	400	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	140	280	420	V
Average Rectifier Forward Current	$I_{F(AV)}$	4			A
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz)	I_{FM}	4			A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	I_{FSM}	125			A
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-55 to +150			°C



DIM	MILLIMETERS	
	MIN	MAX
A	5.97	6.22
B	6.30	6.75
C	2.18	2.40
D	4.95	5.46
E	9.40	10.41
G	2.75	3.20
I	0.46	0.89
J	0.46	0.61
K	1.40	1.78
M	0.64	0.89
T	2.28	2.30
V	0.89	1.27
X	---	1.05

ELECTRICAL CHARACTERISTICS (Ta=25°C Unless otherwise specified)

Characteristic	Symbol	MURD			Unit
		420	440	460	
Maximum Instantaneous Forward Voltage ($I_F = 4$ Amp)	V_F	0.89	1.30		V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_a = 25^\circ\text{C}$) (Rated DC Voltage, $T_a = 125^\circ\text{C}$)	I_R		5.0 50		μA
Reverse Recovery Time ($I_F = 0.5$ A, $I_R = 1.0$ A, $t_{rr} = 0.25$ A)	T_{rr}	25	50		ns

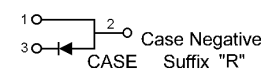
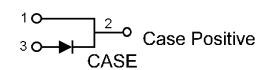


FIG-1 TYPICAL FORWARD CHARACTERISTICS

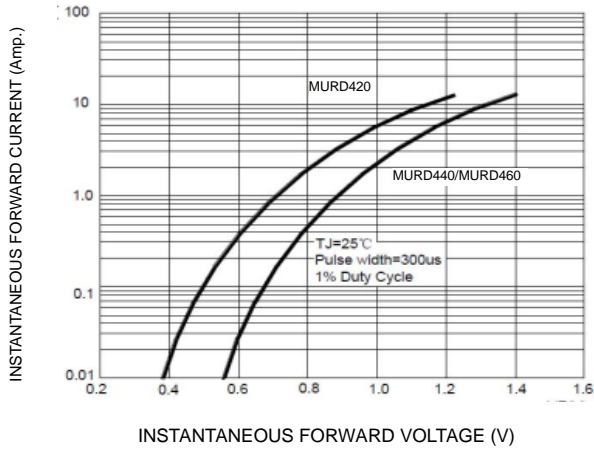


FIG-3 TYPICAL FORWARD CURRENT DERATING CURVE

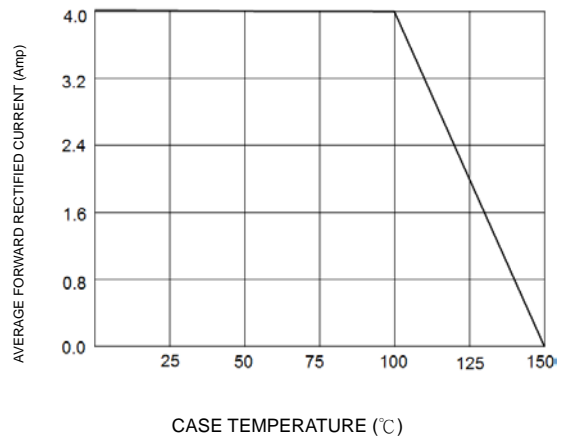


FIG-2 TYPICAL REVERSE CHARACTERISTICS

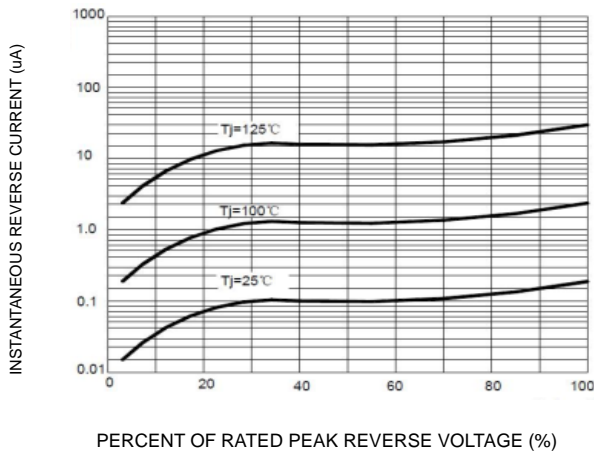
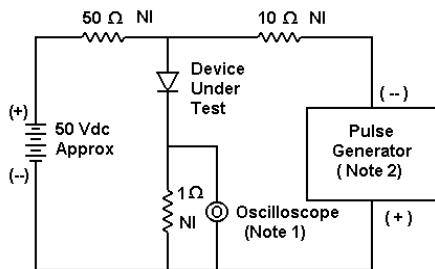
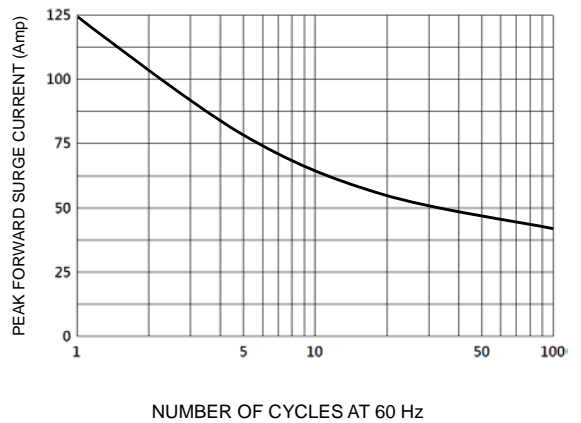
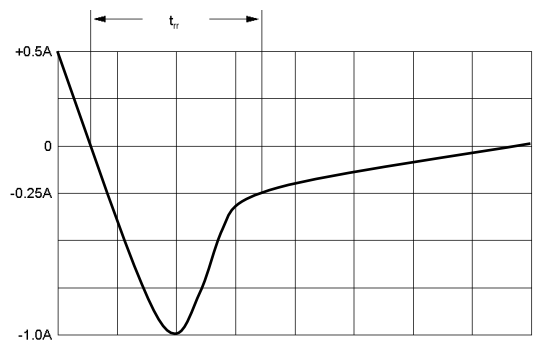


FIG-4 TYPICAL PEAK FORWARD SURGE CURRENT



- Notes:
 1. Rise Time = 7 ns max. Input Impedance = 1 M Ω , 22 pF
 2. Rise Time = 10 ns max. Input Impedance = 50 Ω



Set time base for 10/20 ns/cm

FIG-5 Reverse Recovery Time Characteristic and Test Circuit Diagram

Notice

MOSPEC reserves the rights to make changes of the content herein the document anytime without notification. MOSPEC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies. Please refer to MOSPEC website for the last document.

MOSPEC disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially incurred.

Application shown on the herein document are examples of standard use and operation. Customers are responsible for comprehending suitable use in particular applications. MOSPEC makes no representation or warranty that such application will be suitable for the specified use without further testing or modification.

The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by MOSPEC for any infringements of patents or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of MOSPEC or others.

These MOSPEC products are intended for usage in general electronic equipment. Please make sure to consult with MOSPEC before you use these MOSPEC products in equipment which require specialized quality and/or reliability, and in equipment which could have major impact to the welfare of human life (atomic energy control, aeronautics , traffic control, combustion control, safety devices etc.)