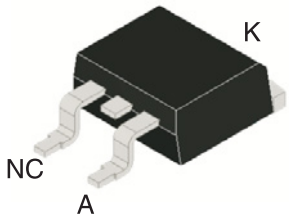
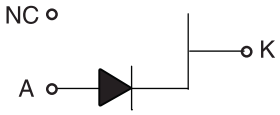
FAGOR

FURD560

5.0 Amp. Surface Mounted Glass Passivated Ultrafast Soft Recovery Rectifier

TO-252AA (DPAK)





Voltage	Current
600 V	5.0 A

FEATURES

- Top-Glass Tecnology
- Low profile package
- Ideal for automated placement
- Ultrafast recovery time for high efficiency
- Low power losses
- Low forward voltaje drop
- High forward surge current capability
- Solder dip 260 ºC, 10s
- AEC-Q101 qualified
- Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 ºC

AUTOMOTIVE GRADE Available

Pb

e3

RoHS COMPLIANT

MECHANICAL DATA

- **Case:** TO-252AA (DPAK). Epoxy meets UL 94V-0 flammability rating.
- **Terminals:** Matte tin plated leads, solderable per MIL-STD-750 Method 2026, J-STD-002 and JESD22-B102. Consumer grade, meets JESD 201 class 1A whisker test.
- **HE3 suffix** for high reliability grade, meets JESD 201 class 2 whisker test.

TYPICAL APPLICATIONS

Used in general purpose rectification of powe supplies, inverters, converters and freewheeling diodes for consumer, automotive and telecomunication.

Maximum Ratings and Electrical Characteristics at 25 °C

		FURD560
Marking Code		**FURD560**
V_{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	600
V_{RMS}	Maximum RMS Voltage (V)	420
V_{DC}	Maximum DC Blocking Voltage (V)	600
$I_{F(AV)}$	Forward current at T_L = 130 ºC	5.0 A
I_{FSM}	8,3 ms. Peak Forward Surge Current (Jedec Method)	50 A
C_j	Typical Junction Capacitance (1MHz; -4V)	45 pF
$R_{th\ (j-a)}$	Maximum Thermal Resistance Junction to Ambient: . FR4 PCB Standard Footprint	85 ºC/W
$R_{th\ (j-c)}$	Maximum Thermal Resistance Junction to Solder Point	2.5 ºC/W
T_j - T_{stg}	Operating Juction and Storage Temperature Range	- 55 to + 175 ºC

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Static Electrical Characteristics

Symbol	Parameter	Test Conditions	Max.	Unit
V_F	Max. Instantaneous Forward Voltage	T_j = 25 ºC I_F = 5.0 A	1.85	V
		T_j = 150 ºC I_F = 5.0 A	1.40	
I_R	Max. DC Reverse Leakage Current	T_j = 25 ºC V_R = V_{RRM}	5	µA
		T_j = 150 ºC V_R = V_{RRM}	130	

Recovery Characteristics (Tj = 25 °C)

Symbol	Test Conditions	Max.	Typ.	Unit
trr	I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A	25		ns
trr	IF = 5 A , dI_F/dt = 50 A/µ, V_R = 30 V		30	ns
ta			20	
tb			10	

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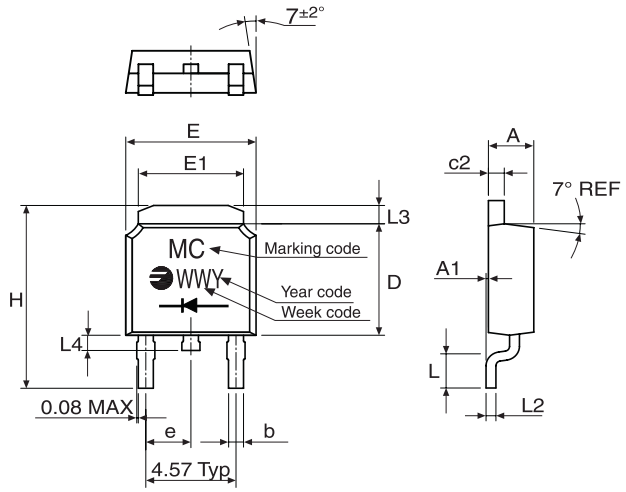
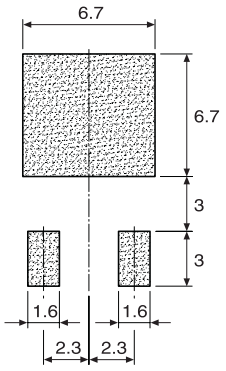
Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
FURD560 TR	TR	13" diameter tape and reel	2,500	0.30
FURD560 HE3 TR	TR	13" diameter tape and reel	2,500	0.30

Package Outline Dimensions: (mm) TO-252AA (DPAK)



Mounting Pad Layout



REF.	DIMENSIONS Milimeters		
	Min.	Nominal	Max.
A	2.18	2.3	2.39
A1	0	0.127	0.127
b	0.64	0.75	0.89
c2	0.46	0.51	0.56
D	5.97	6.1	6.22
E	6.47	6.6	6.73
E1	5.20	5.34	5.46
e		2.28BSC	
H	9.77	10.03	10.28
L	1.31	1.44	1.57
L2	0.46	0.51	0.56
L3	0.89	1.02	1.14
L4	0.51	0.76	1.02

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Fig 1. Typical Forward I-V Characteristics as a function of junction temperature

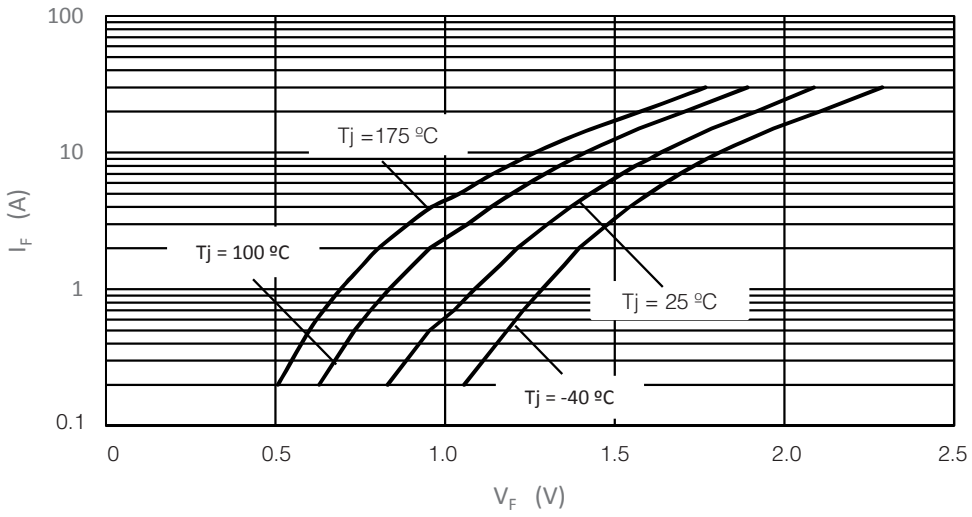

Fig 2. Typical Reverse Current vs. Reverse Voltage for different junction temperatures

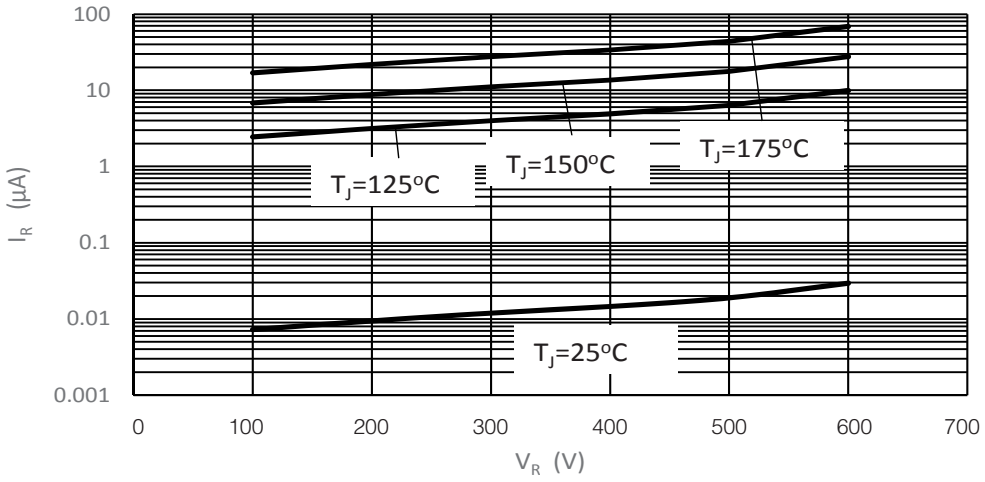

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Fig 3. Forward Current Derating Curve

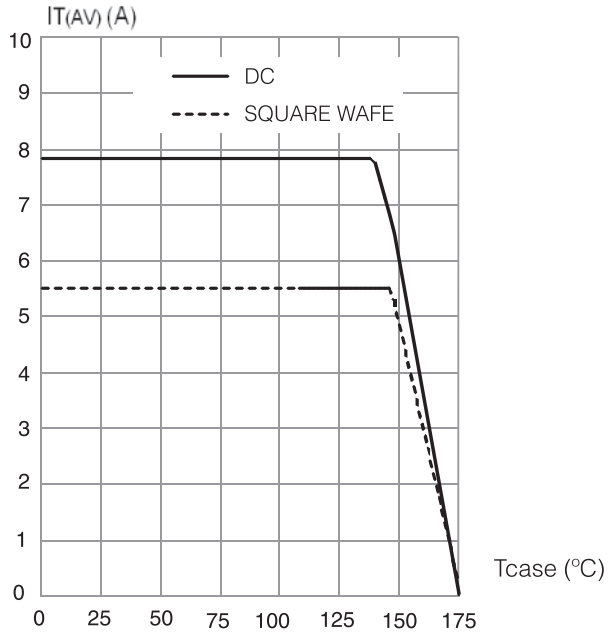

Fig 4. Forward Power Dissipation

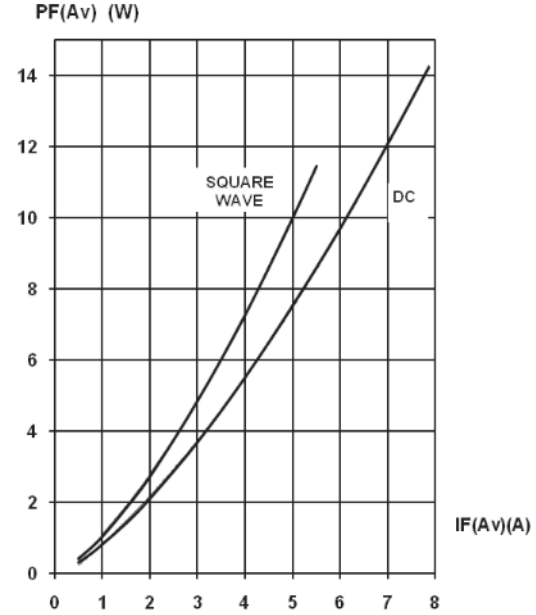

Fig 5. Typical Junction Capacitance vs. Reverse Voltage

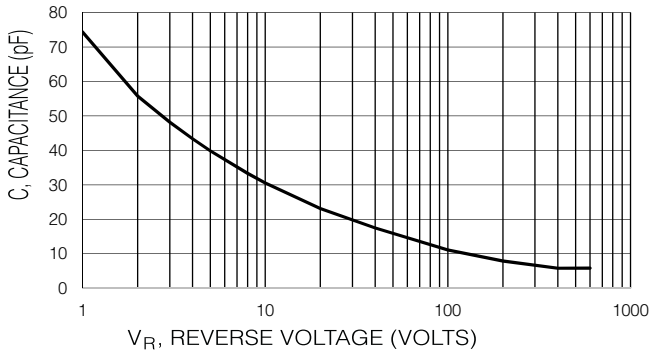

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Fig 6. Maximum Peak Forward Surge Current vs. Number of Cycle at 60 Hz

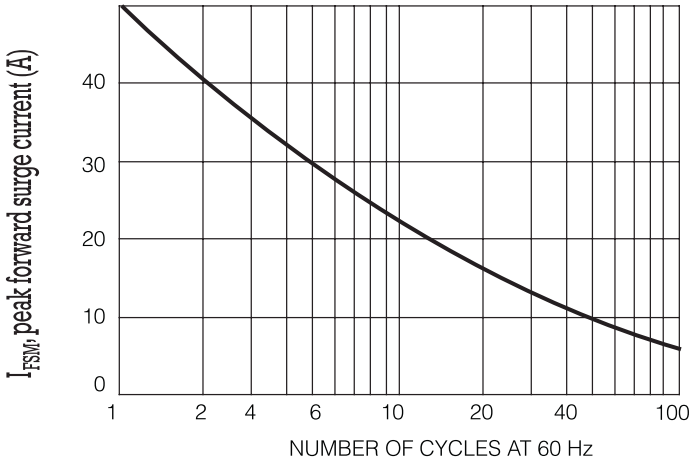


Fig 7. trr Waveforms and Definitions

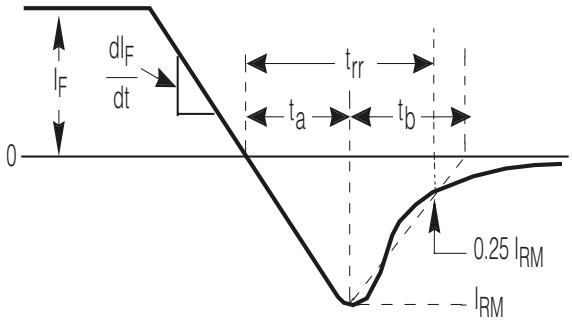
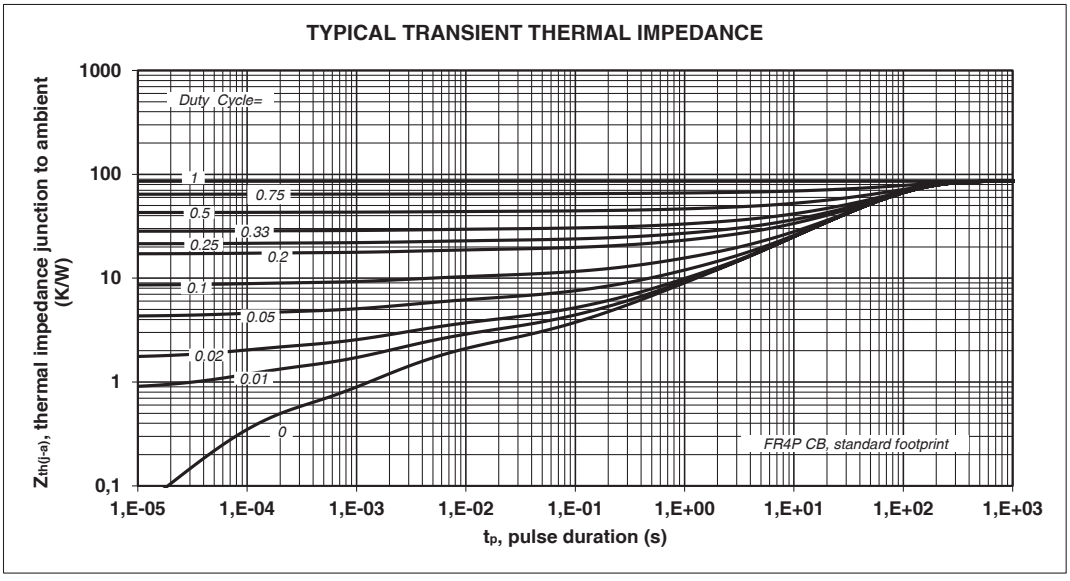


Fig 8. Relativa Variation of Thermal Impedance to Ambient vs. Pulse Duration



Revision History

DATE	REVISION	DESCRIPTION OF CHANGES
04-Jun-2018	0	Original Data Sheet

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All product, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.

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