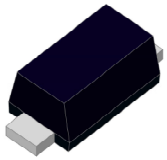
FAGOR

FES2JZSR

2.0 Amp. Surface Mounted Glass Passivated Ultrafast Soft Recovery Rectifier

SOD128



Voltage	Current
600 V	2.0 A

FEATURES

- Low profile package
- Ideal for automated placement
- Low power losses, high efficiency
- High surge current capability
- Cavity-free glass passivated junction
- Low forward voltaje drop
- 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
- Very soft recovery characteristics
- Significantly reduced EMI. Very low Noise.

AUTOMOTIVE GRADE Available

Pb

e3

RoHS COMPLIANT

MECHANICAL DATA

- **Case:** SOD128. Epoxy meets UL 94V-0 flammability rating.
- **Polarity:** Color band denotes cathode end.
- **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 high frecuency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, automotive and telecommunication.

Maximum Ratings and Electrical Characteristics at 25 °C

		FES2JZSR
Marking Code		**KA**
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 = 145 ºC	2,0 A
C_j	Typical Junction Capacitance (1MHz; -4V)	25 pF
$R_{th(j-a)}$	Maximum Thermal Resistance Junction to Ambient: . FR4 PCB Standard Footprint . FR4 PCBMounting Pad for Cathode 1cm²	 162 ºC/W 112 ºC/W
$R_{th(j-sp)}$	Maximum Thermal Resistance Junction to Solder Point	15 ºC/W
T_j - T_{stg}	Operating Juction and Storage Temperature Range	- 65 to + 175 ºC

Symbol	Parameter	Value	Units
I_{FSM}	Non Repetitive surge peak forward current (8.3 msg. peak forward surge JEDEC Method)	100A	Amps.

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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 = 2.0 A	1.70	V
		T_j = 100 ºC I_F = 2.0 A	1.40	
		T_j = 25 ºC I_F = 0.7 A	1.40	
I_R	Max. DC Reverse Leakage Current	T_j = 25 ºC $V_R = V_{RRM}$	1	µA
		T_j = 100 ºC $V_R = V_{RRM}$	10	
		T_j = 150 ºC $V_R = V_{RRM}$	100	

Recovery Characteristics (Tj = 25 °C)

Symbol	Test Conditions	Max.	Typ.	Unit
trr	I_F = 0.5A, I_R = 1A, I_{rr} = 0.25A	25		ns
trr	I_F = 1A, dI_F/dt= 50A/µ, V_R = 30V	40	30	ns
ta			17	
tb			13	

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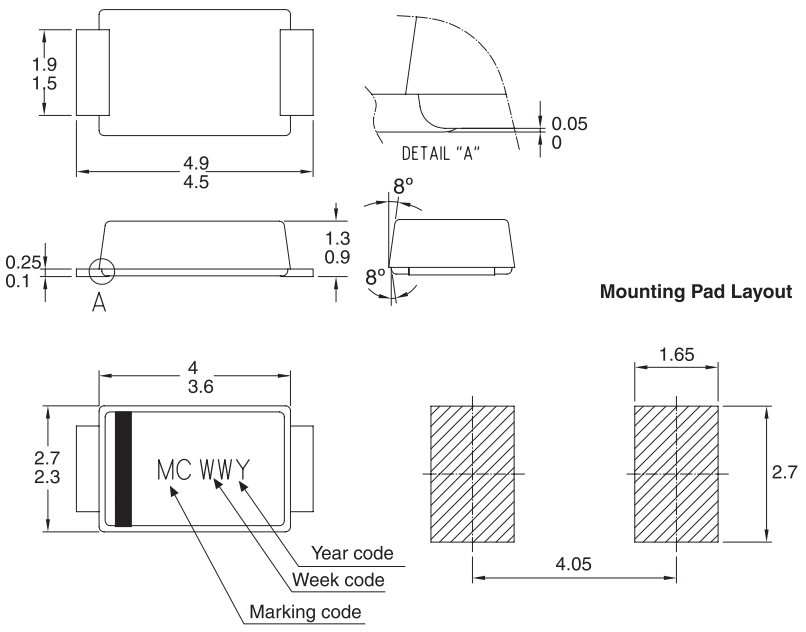
Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
FES2JZSR HE3 TRTB	TRTB	13" diameter tape and reel	10,000	0.0180

Package Outline Dimensions: (mm) SOD128



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Ratings and Characteristics (T_{amb} = 25ºC unless otherwise noted)

Fig. 1 RELATIVE VARIATION OF THERMAL IMPEDANCE TO AMBIENT vs. PULSE DURATION

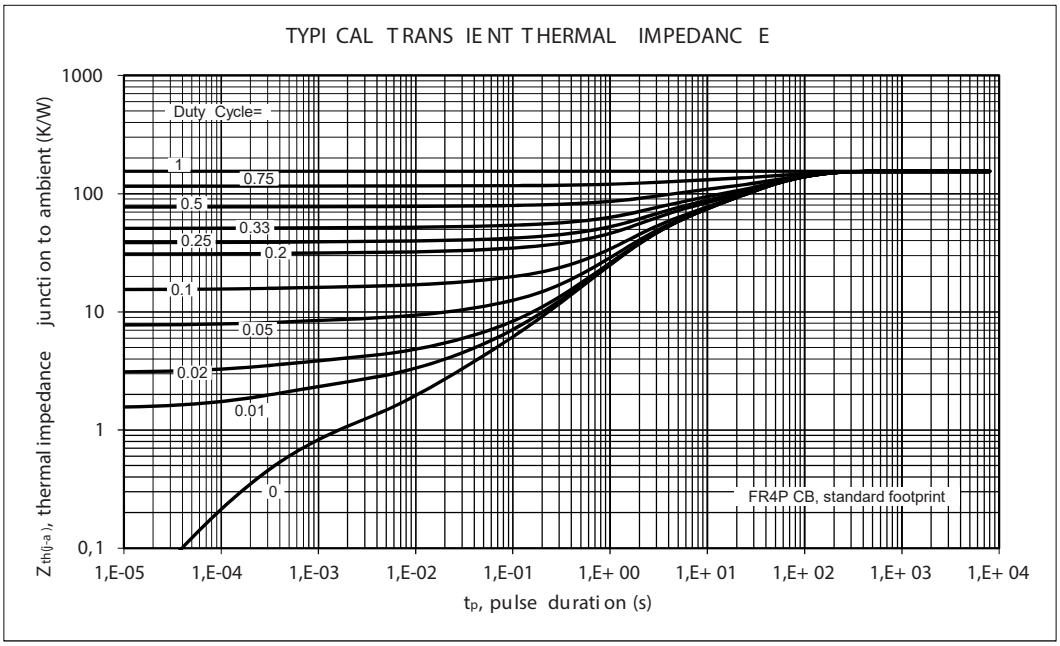
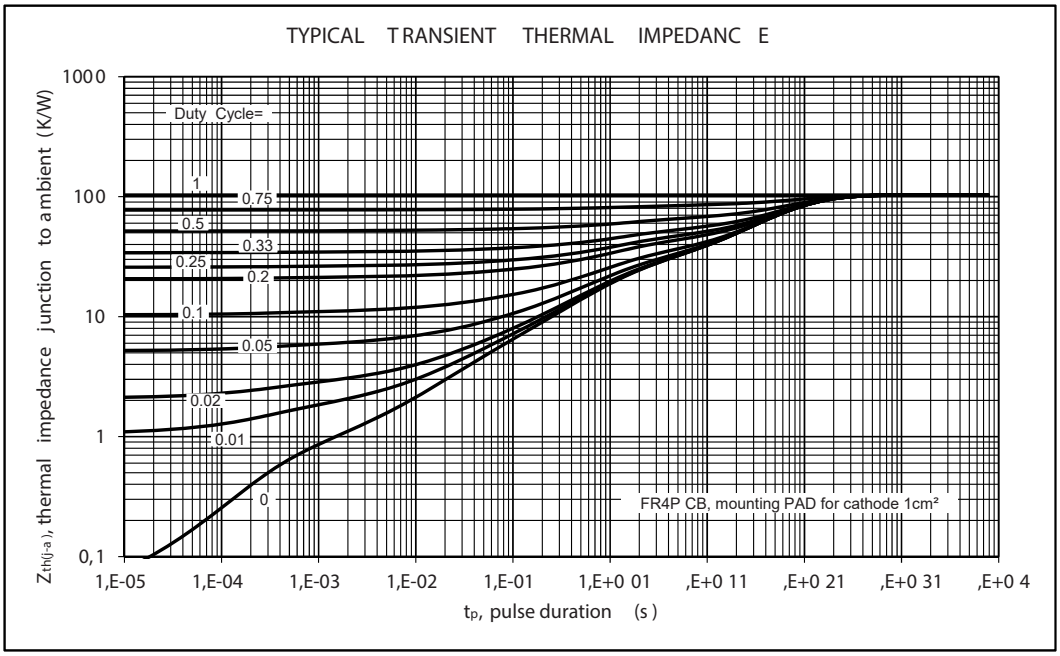


Fig. 2 RELATIVE VARIATION OF THERMAL IMPEDANCE TO AMBIENT vs. PULSE DURATION



Ratings and Characteristics (T_{amb} = 25ºC unless otherwise noted)

Fig. 3 TYPICAL JUNCTION CAPACITANCE vs. REVERSE VOLTAGE

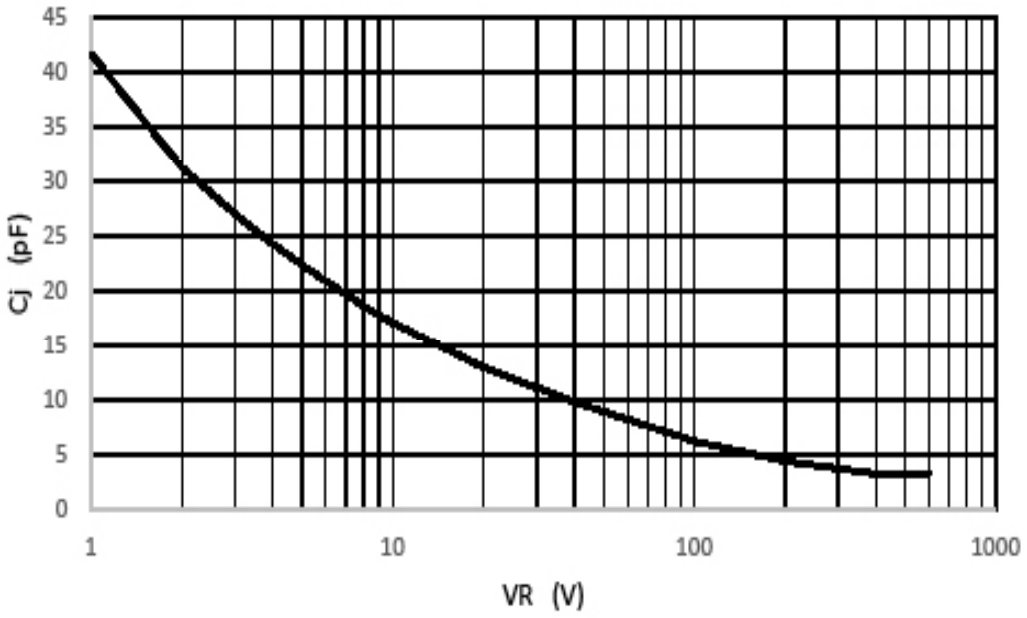
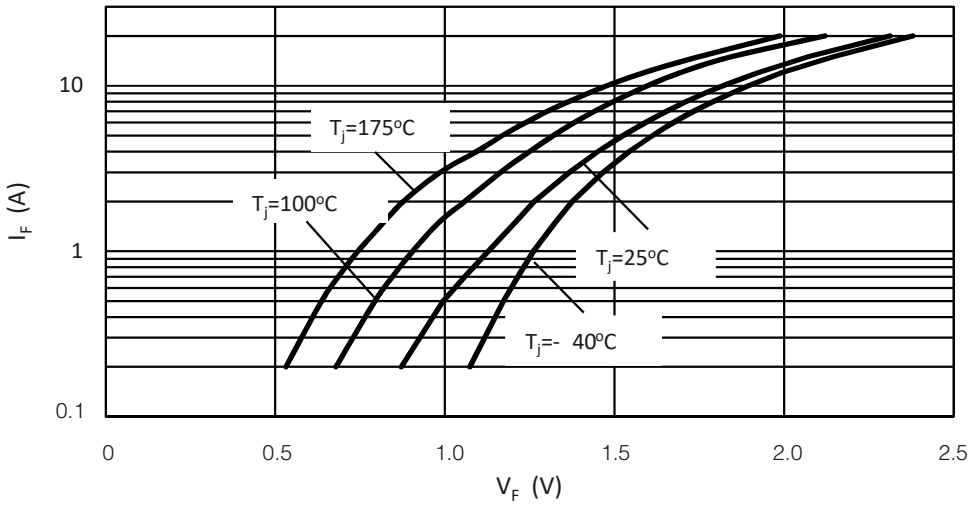
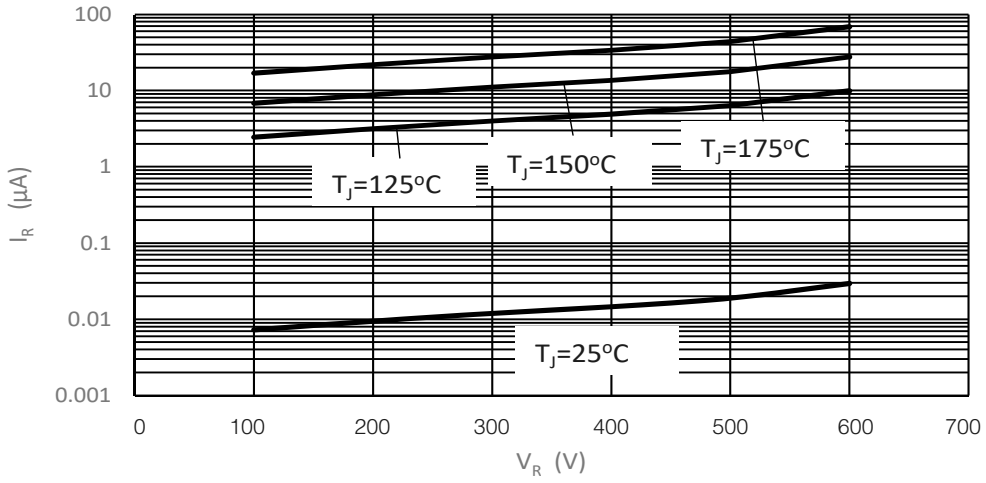


Fig. 4 TYPICAL FORWARD I-V CHARACTERISTICS AS A FUNCTION OF JUNCTION TEMPERATURE



Ratings and Characteristics (T_{amb} = 25ºC unless otherwise noted)

Fig. 5 TYPICAL REVERSE CURRENT vs. REVERSE VOLTAGE FOR DIFFERENT JUNCTION TEMPERATURES



Revision History

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

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