

SURFACE MOUNT FAST EFFICIENT RECTIFIERS

REVERSE VOLTAGE - 50 to 1000 Volts
FORWARD CURRENT - 1.0 Amperes

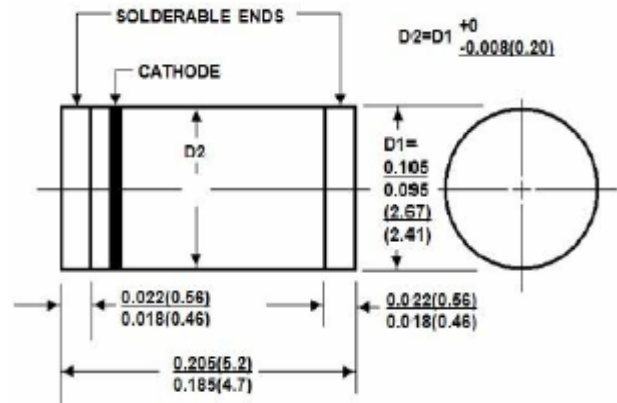
FEATURES

- For surface mount applications
- Glass passivated chip junction
- Low leakage current
- High forward surge capability
- Fast switching for high efficiency
- High temperature soldering guaranteed:
260°C/10 seconds at terminals
- Lead and body according with RoHS standard

MECHANICAL DATA

- Case: Molded plastic body
- Terminals: Solder plated
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.0046 ounce, 0.116 gram

DO-213AB (MELF LL-41)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	SUF 4001	SUF 4002	SUF 4003	SUF 4004	SUF 4005	SUF 4006	SUF 4007	UNIT	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	720	V	
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current @T _A = 75 °C	I _{F(AV)}	1.0							A	
Peak Forward Surge Current 8.3ms Single Half Sine-Wave	I _{FSM}	30							A	
Maximum Instantaneous Forward Voltage at 1.0A DC	V _F	1.0		1.25		1.7			V	
Maximum DC Reverse Current @T _J =25°C at Rated DC Blocking Voltage @T _J =125°C	I _R	5.0							μA	
Maximum full load reverse current, full cycle average at T _A = 55°C	I _{R(AV)}	50							μA	
Typical reverse recovery time (NOTE 1)	T _{RR}	50							nS	
Typical Junction Capacitance (Note2)	C _J	20				14				pF
Typical Thermal Resistance (Note3)	R _{θJA}	60							°C/W	
Typical Thermal Resistance (Note4)	R _{θJT}	30							°C/W	
Operating Temperature Range	T _J	-55 to +150							°C	
Storage Temperature Range	T _{STG}	-55 to +150							°C	

NOTES:1.Reverse recovery test conditions I_F=0.5A,I_R=1.0A.I_{rr}=0.25A

2.Measured at 1.0MHz and applied reverse voltage of 4.0 Volts

3.Thermal resistance from junction to ambient,0.24×0.24''(6.0×6.0mm)copper pads to each terminal

4.Thermal resistance from junction to terminal,0.24×0.24''(6.0×6.0mm)copper pads to each terminal

FIG. 1 - FORWARD CURRENT DERATING CURVE

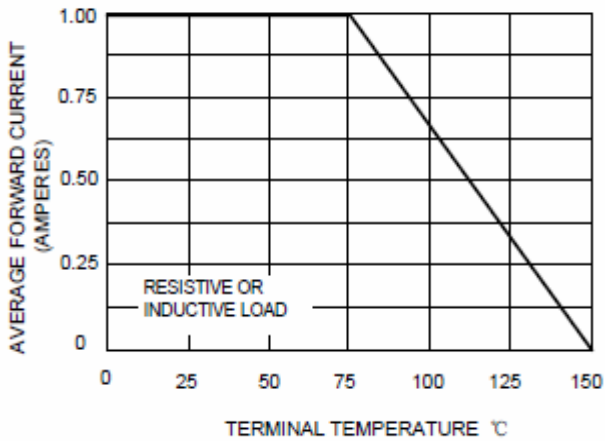


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

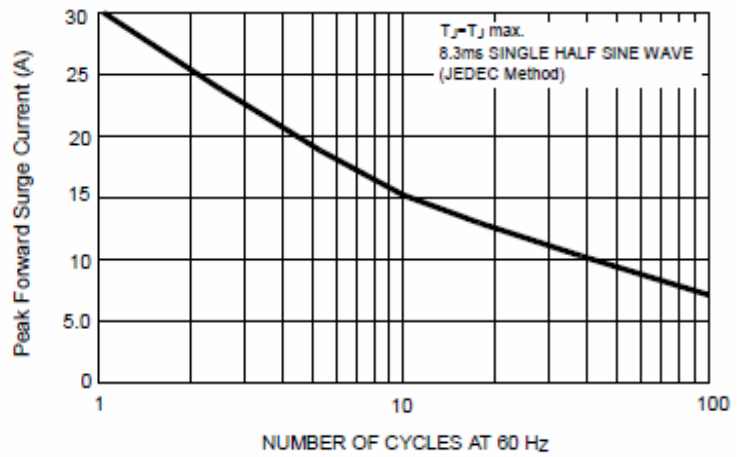


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

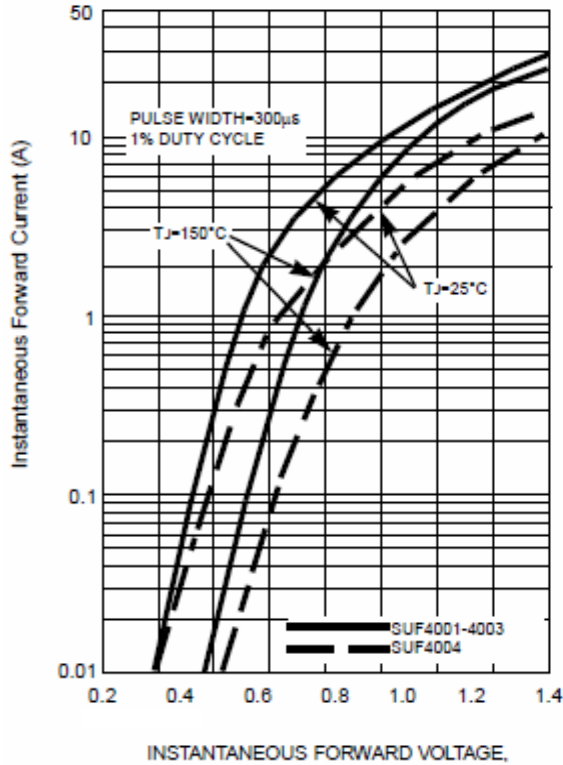


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

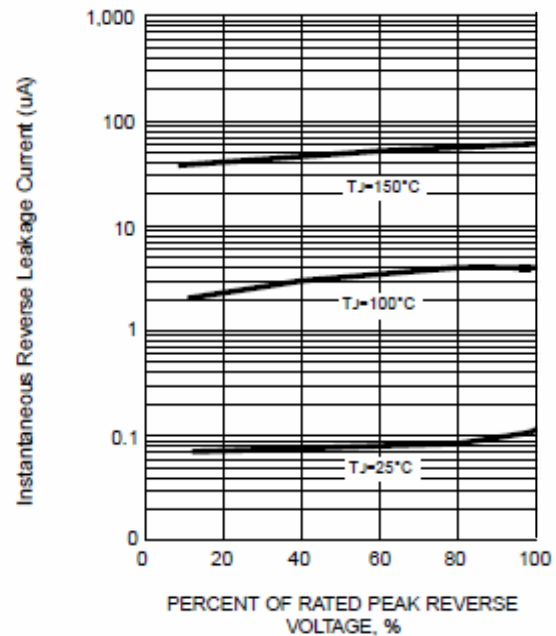


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

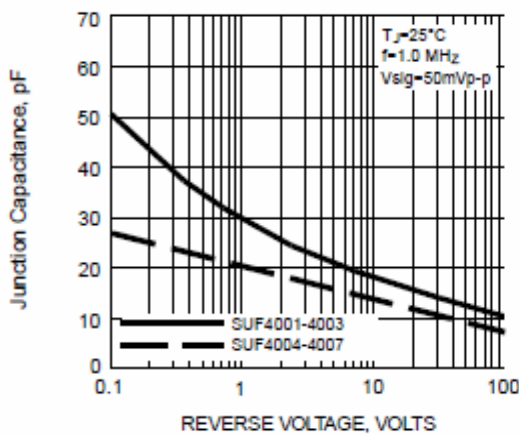


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

