SUF4001 thru SUF4007

表面安装超快恢复整流二极管

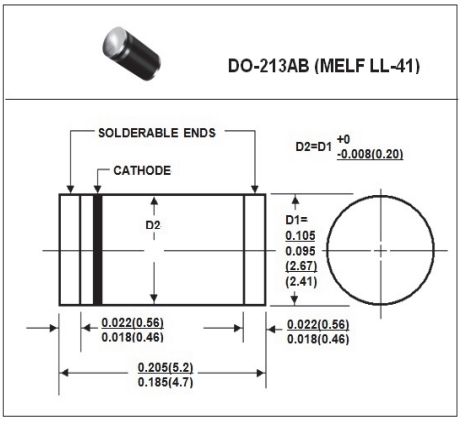
反向电压50 --- 1000 V

正向电流1A

Surface Mount Fast Efficient Rectifiers

Reverse Voltage 50 to 1000 V

Forward Current 1 A



特征 Features

- 表面安装应用 For surface mount applications
- 玻璃钝化烧结 Glass passivated chip junction
- 低漏电流 Low leakage current
- 高正向浪涌能力 High forward surge capability
- 快速开关高频应用 Fast switching for high efficiency
- 高温焊接保证 260°C/10秒 High temperature soldering guaranteed: 260°C/10 seconds at terminals
- 引线和管体皆符合 RoHS 标准。Lead and body according with RoHS standard

机械数据 Mechanical Data

- 封装: 塑料封装 Case: Molded plastic body
- 端子: 焊料被镀 Terminals: Solder plated
- 极性: 色环端为负极 Polarity: Color band denotes cathode end
- 安装位置: 任意 Mounting Position: Any
- 重量 0.0046盎司,0.116克 Weight: 0.0046 ounce, 0.116 gram

极限值和温度特性 T_A = 25℃ 除非另有规定

Maximum Ratings & Thermal Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

	Symbols	SUF 4001	SUF 4002	SUF 4003	SUF 4004	SUF 4005	SUF 4006	SUF 4007	Unit
最大反向峰值电压 Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
最大反向有效值电压 Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	720	V
最大直流阻断电压 Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
最大正向平均整流电流 T_T=75℃ Maximum average forward rectified current at T_A= 75℃	$I_{F(AV)}$	1.0							A
正向峰值浪涌电流 8.3ms单一正弦半波 Peak forward surge current 8.3 ms single half sine-wave	I_{FSM}	30							A
最大反向满负载漏电流 Maximum full load reverse current, full cycle average at T_A= 55℃	$I_{R(AV)}$	50							uA
典型热阻 (NOTE 3) Typical thermal resistance (NOTE 4)	$R_{\theta JA}$ $R_{\theta JT}$	60 30							℃/W
工作结温和存储温度 Operating junction and storage temperature range	T_J, T_{STG}	-55---+150							℃

电特性 TA = 25℃除非另有规定。

Electrical Characteristics Ratings at 25℃ ambient temperature unless otherwise specified

	Symbols	SUF 4001	SUF 4002	SUF 4003	SUF 4004	SUF 4005	SUF 4006	SUF 4007	Unit
最大瞬间正向电压 I_F = 1.0A Maximum instantaneous forward voltage at 1.0A	V_F	1.0			1.25	1.70			V
最大反向直流漏电流 T_A= 25℃ Maximum DC reverse current T_A= 125℃	I_R	5.0 50							uA
典型反向恢复时间 Typical reverse recovery time (NOTE 1)	Trr	50							ns
典型结电容 Type junction capacitance (NOTE 2)	C_J	20				14			pF

NOTES:

(1) Reverse recovery test conditions I_F=0.5A,I_R=1.0A.Irr=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 - MAXIMUM FORWARD CURRENT DERATING CURVE

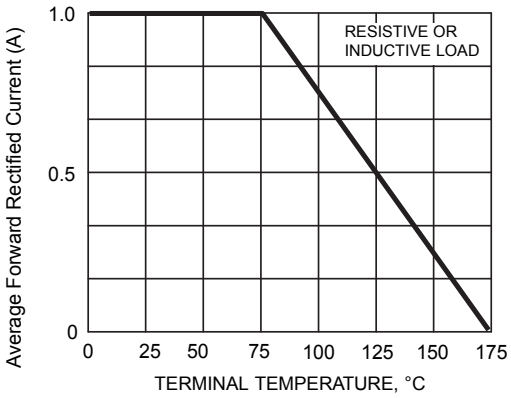


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

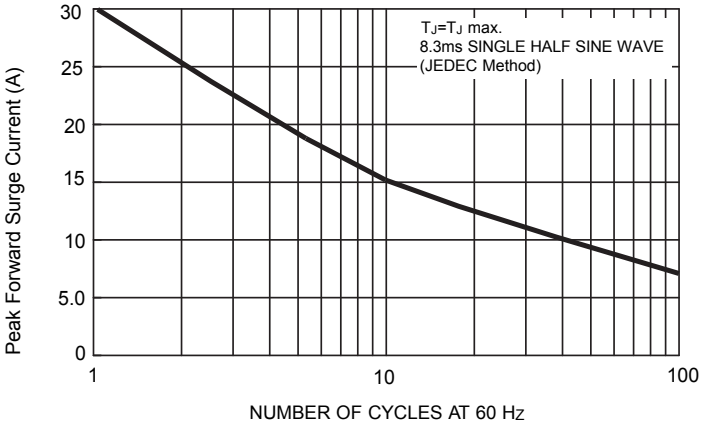


FIG. 3 -TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

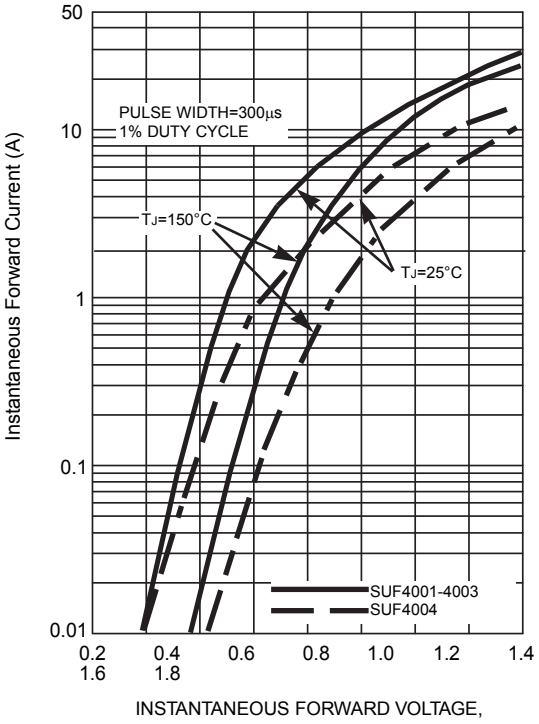


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

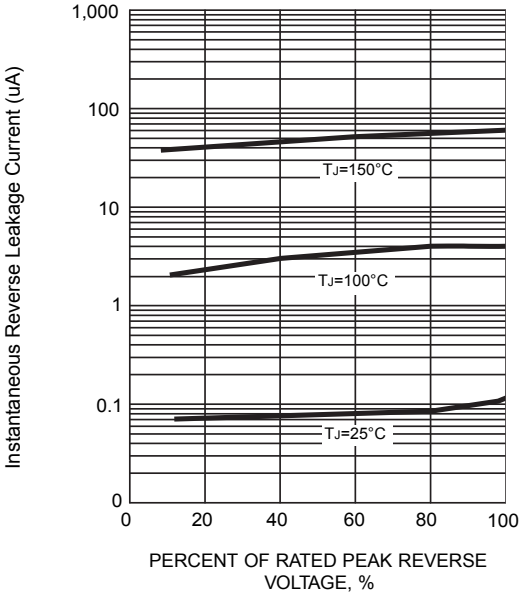


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

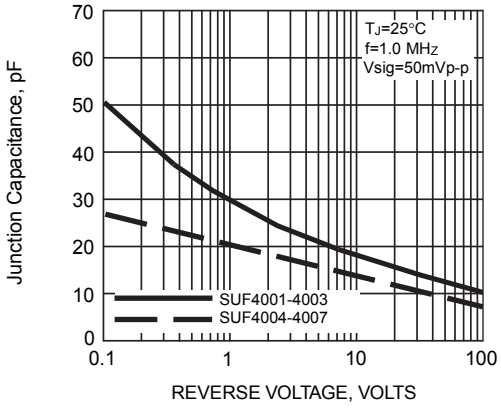
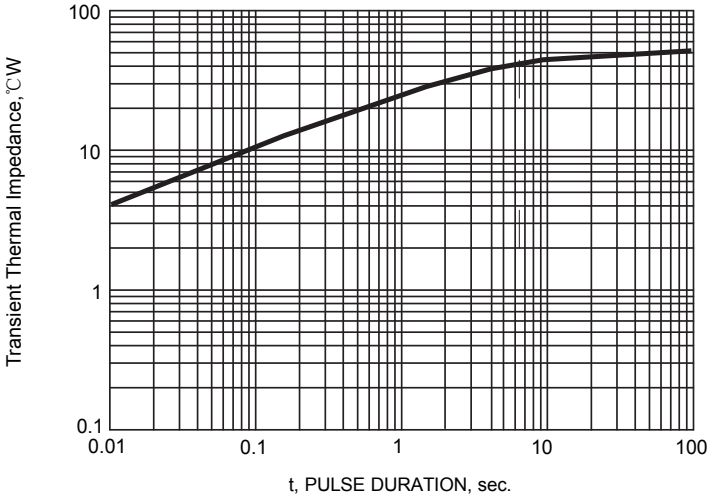
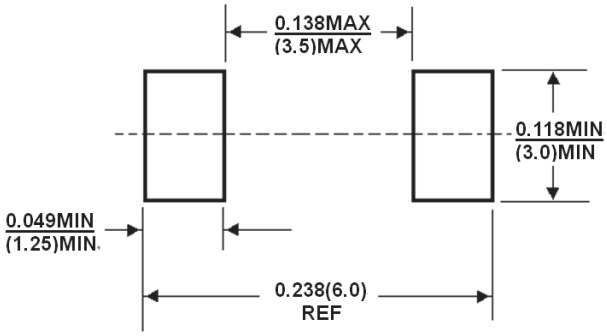


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE



Mounting Pad Layout



Packing

Part number	Component Package	Quantity	Packaging Option
SUF4001—SUF4007	DO-213AB(MELF LL-41)	5000	Tape & Reel – 12mm/13” tape

Tape and Reel Specification