Application Note



Package	SOD-123FL	DO-213AA / MiniMelf	Low Cost SMA	DO-214AC / SMA	DO-213AB / Melf
Drawing			5.3* ⁸⁰ 0.22* ⁸⁰⁷ 0.22* ⁸⁰⁷ 0.25* ⁸⁰⁷ 0.25* ⁸⁰⁷ 0.25* ⁸⁰⁷ 0.25* ⁸⁰⁷ 0.25* ⁸⁰⁷ 0.25* ⁸⁰	$\begin{array}{c} \bullet \\ & \bullet \\ &$	+ + 2.5 + + 2.5 + + + 2.5 + + + + 2.5 + + + + + + + + + + + + + + + + + + +
Voltage V _{RRM} 50V	SL1A	GL1A	M1	S1A	SM4001
(high runner) 100V	SL1B	GL1B	M2	S1B	SM4002
200V	SL1D	GL1D	M3	S1D	SM4003
400V	SL1G	GL1G	M4	S1G	SM4004
600V	SL1J	GL1J	M5	S1J	SM4005
800V	SL1K	GL1K	M6	S1K	SM4006
1000V	SL1M	GL1M	M7	S1M	SM4007
1300V	-	-	-	S1T	SM513
1600V	NEW	-	NEW	S1W	SM516
1800V	-	-	-	S1X	SM518
2000V	-	-	-	S1Y	SM2000
Forward voltage drop	$V_{\mbox{\tiny F}} < 1.1 \mbox{V}$ at $I_{\mbox{\tiny F}} = 1 \mbox{A}$	$V_{\rm F} < 1.2/1.3V$ at 1A	$V_{\text{F}} < 1.1 \text{V}$ at I_{F} = 1A	$V_{\text{F}} < 1.1 \text{V}$ at $I_{\text{F}} = 1 \text{A}$	$V_{\text{F}} < 1.1 \text{V}$ at I_{F} = 1A
Forward surge $I_{\mbox{\tiny FSM}}$	27/30A (10ms/8.3ms)	27/30A (10ms/8.3ms)	27/30A (10ms/8.3ms)	30/32A (10ms/8.3ms)	40/44A (10ms/8.3ms)
Recommended Solder Method	Wave, Reflow	Wave	Wave, Reflow	Wave, Reflow	Wave
Advantages	Very small package outline	Replaces devices in SOD-87	Low Cost	Available up to 2000V	Highest forward surge capabiltiy
Why to buy from Diotec?	Offered in halogen-free package	Over 15 years of experience with this package	Known Brand	Only supplier which offers up to 2000V	Up to 2000V, >20 years of experience

Rectifiers with 1 Amp in SMD are widely used for 50/60Hz input rectification in all kind of electronics. This note deals with optimized solutions for every need.