

Super Fast Surface Mount Rectifiers
SMC(DO-214AB)

Features

- ROHS compliant
- Glass passivated chip
- High forward surge capability
- Meet MSL level 1, per J-STD-020
LF maximum peak of 250 °C
- Solder dip 260 °C / 40S
- Component in accordance to ROHS 2002/95/EC and WEEE 2002/96/WC
- UL recognition, file number E342874


Primary characteristics

$I_{F(AV)}$	3A
V_{RRM}	50V to 600V
I_{FSM}	100A
I_{RM}	10uA
V_{FM} at $I_F=3A$	0.95/1.3/1.7V
T_J max.	150 °C

Applications

Ideal for ac-to-dc bridge full wave rectification such as SMPS, home appliances, office equipment, industrial automation applications

Mechanical data

- SMC(DO-214AB)
- Epoxy meets UL 94 V-0 flammability rating
- Terminals: Tin plated leads.
- Polarity: As marked.
- Mounting Torque:10cm·kg(8.8 inches·lbs)max.
- Recommended Torque:5.7 cm·kg(5 inches·lbs)

Maximum rating (Ta=25°C unless otherwise noted)

Parameter	Sym	SMC(DO-214AB)							Unit
		ES 3A	ES 3B	ES 3C	ES 3D	ES 3F	ES 3G	ES 3J	
Max. repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Max. RMS reverse voltage	V_{RMS}	35	70	105	140	210	280	420	V
Max. DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Max. average forward current	$I_{F(AV)}$	3							A
Non-repetitive peak forward surge current 8.3ms single half-sine-wave	I_{FSM}	100							A
Max. instantaneous forward voltage drop per diode	V_{FM}	0.95			1.3		1.7		V
Max. instantaneous reverse current at rated DC blocking voltage	I_{RM}	10							μ A
		500							
Operating junction temperature	T_J	-55 ~ +150							°C
Storage temperature	T_{STG}	-55 ~ +150							°C
Maximum reverse recovery time (Note1)	t_{rr}	35							nS
Typical thermal resistance (Note2)	R_{J-A}	47							°C/W
	R_{J-L}	12							°C/W

Notes:

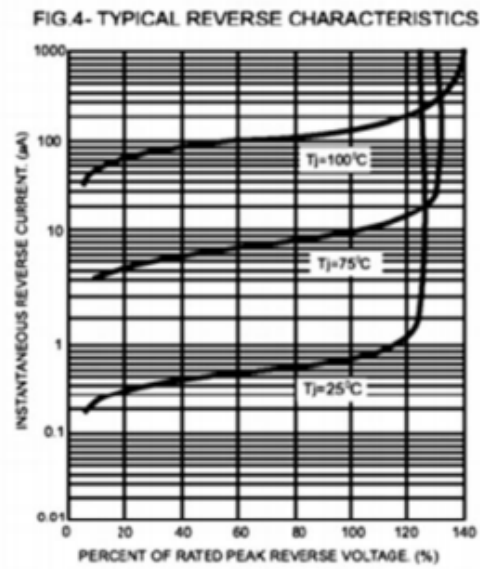
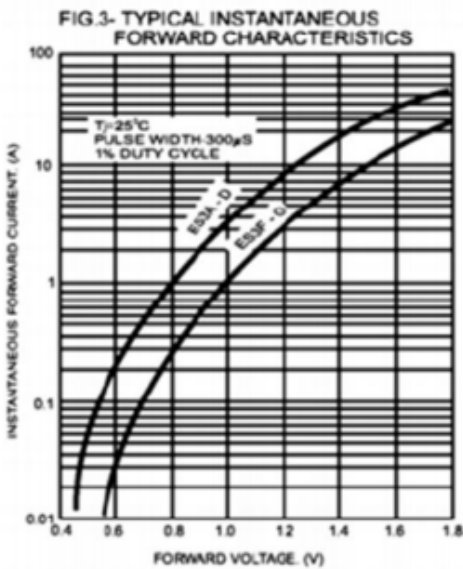
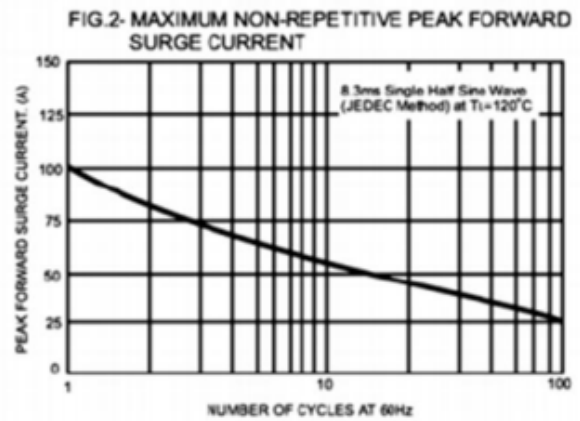
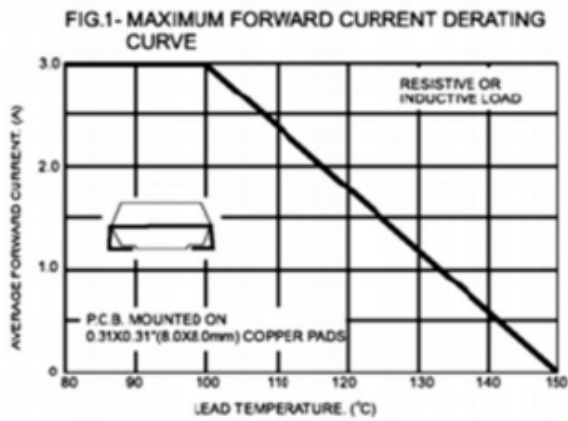
1 Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $IRR=0.25A$

2 The thermal resistance from junction to ambient, case or mount, mounted on P.C.B with 8x8mm copper pads, 2 OZ, FR4 PCB

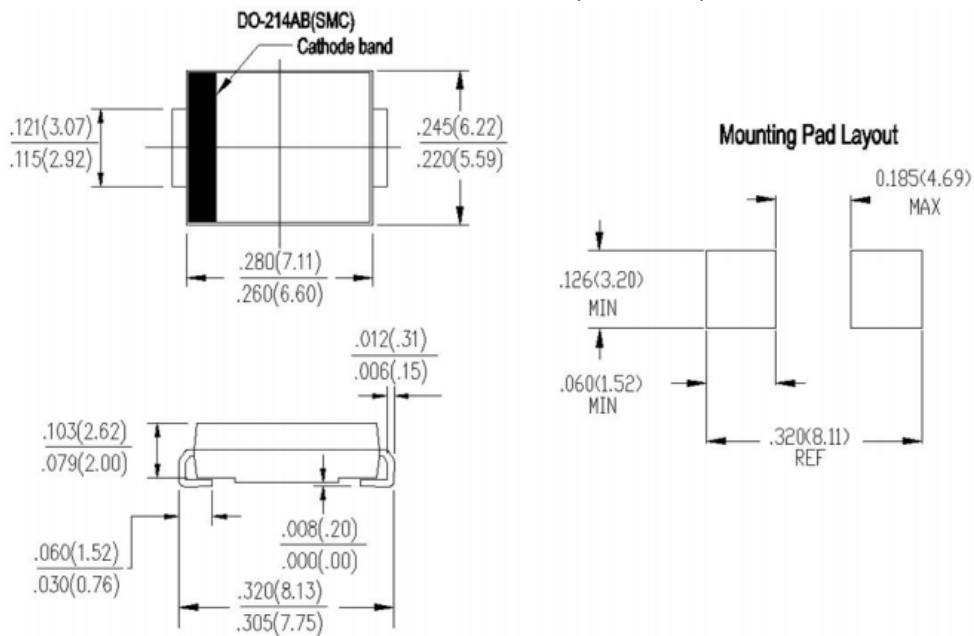
Ordering information (Example)

PREFERRED	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
ES3A				

Typical characteristics



Package outline dimensions



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