

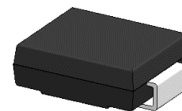
3A,50-600V Superfast Rectifiers

Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds



RoHS
COMPLIANT



SMC (DO-214AB)

Applications

For use in secondary rectification and freewheeling for superfast switching speeds of converters in consumer applications.

Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)									
Parameter	Symbol	ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3J	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current	I _{F(AV)}	3							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	100							A
Operating junction temperature range	T _J	-55 to +150							°C
Storage temperature range	T _{STG}	-55 to +150							°C

Thermal-Mechanical Specifications (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{θJA}	65	°C/W
Thermal Resistance, Junction to Case	R _{θJC}	10	°C/W
Thermal Resistance, Junction to Lead	R _{θJL}	15	°C/W

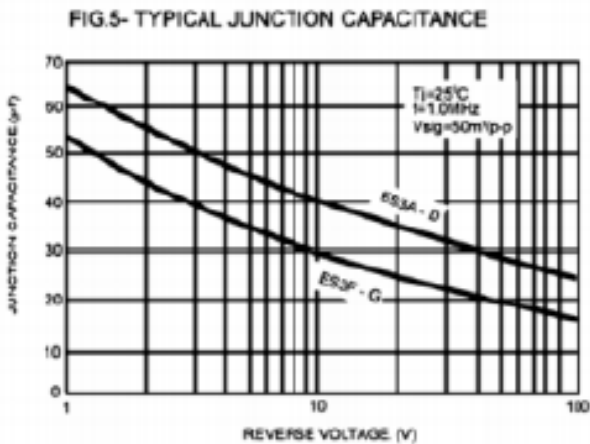
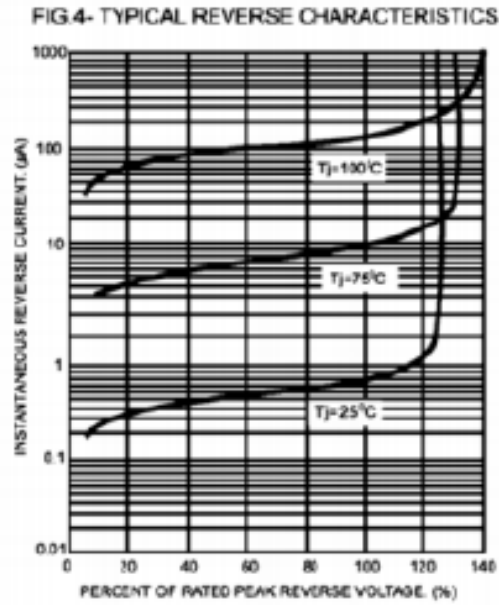
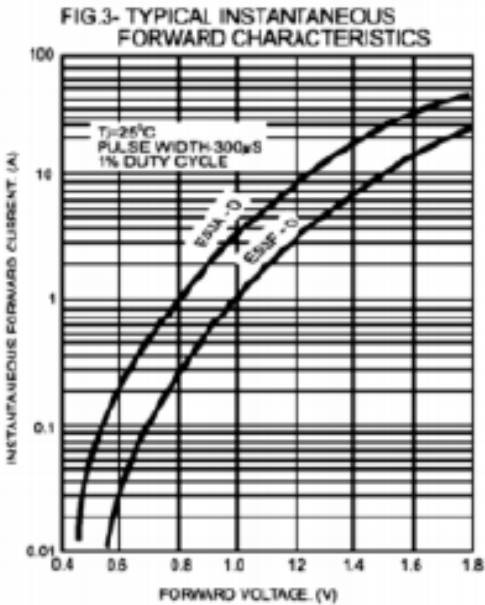
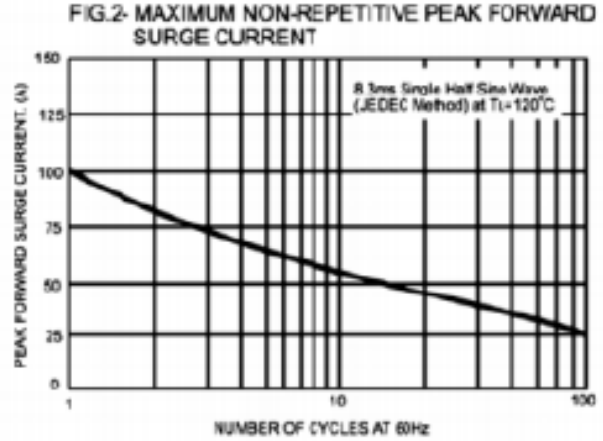
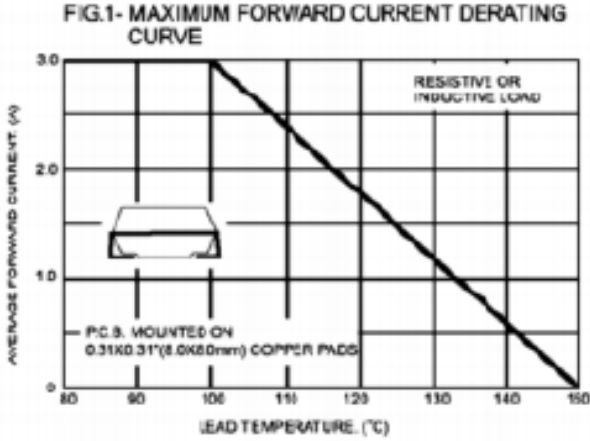
Electrical Specifications (T _A =25°C unless otherwise noted)										
Parameter	Symbol	Test Conditions	ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3J	Unit
Forward Drop Voltage	V _F	I _F =3A	0.95				1.30		1.70	V
Reverse leakage current @V _R	I _R	T _J =25°C	10							uA
		T _J =125°C	500							
Typical junction capacitance	C _J	4.0 V 1 MHz	50				40			pF
Maximum reverse recovery time	t _{rr}	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A	35							nS

Note:

1. Mounted on copper pad area of 8.0 x 8.0mm to each terminal.

Ratings and Characteristics Curves

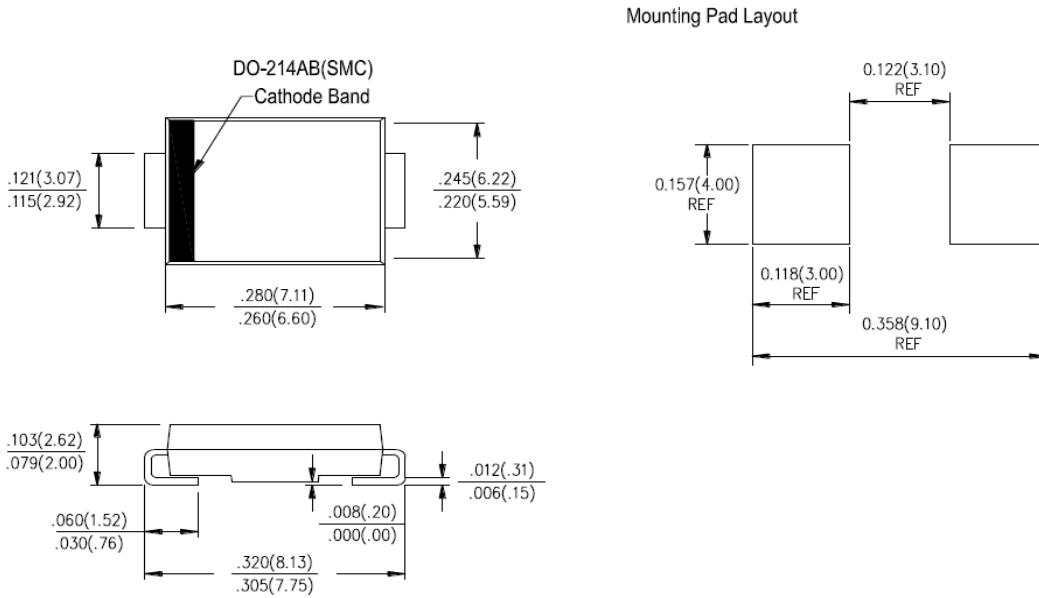
(TA = 25°C unless otherwise noted)



Package Outline Dimensions

in inches (millimeters)

SMC (DO-214AB)



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.10.20	Modify document format

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