



Features

- Ultrafast reverse recovery time
- Low leakage current
- Low switching losses, high efficiency
- High forward surge capability
- Solder dip 260 °C max. 10 s, per JESD 22-B106

VOLTAGE RANGE: 50 --- 800 V

CURRENT: 3.0 A

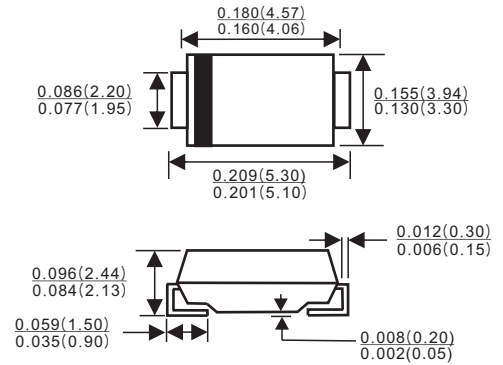
SMB/DO-214AA

Typical Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer and telecommunication.

Mechanical Data

- **Package:** DO-214AB (SMC)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes the cathode end



Dimensions in inches and(millimeters)

■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3H	ES3J	ES3K
Device marking code			ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3H	ES3J	ES3K
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	150	200	300	400	500	600	800
Maximum RMS Voltage	V_{RMS}	V	35	70	105	140	210	280	350	420	560
Maximum DC blocking Voltage	V_{DC}	V	50	100	150	200	300	400	500	600	800
Average Rectified Output Current @60Hz sine wave, Resistance load, TL (FIG.1)	I_O	A	3.0								
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Tj=25°C	I_{FSM}	A	100								
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C			200								
Current squared time @1ms≤t≤8.3ms Tj=25°C	I^2t	A ² s	41.5								
Storage temperature	T_{stg}	°C	-55 ~ +150								
Junction temperature	T_j	°C	-55 ~ +150								

■Electrical Characteristics (Ta=25°C Unless otherwise specified)

■ Thermal Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3H	ES3J	ES3K
Typical Thermal Resistance	$R_{\theta JA}^{(1)}$	°C/W	50								
	$R_{\theta JL}^{(1)}$		16								
	$R_{\theta JC}^{(1)}$		12								

Note (1)

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

■ Characteristics (Typical)

FIG1: Io-TL Curve

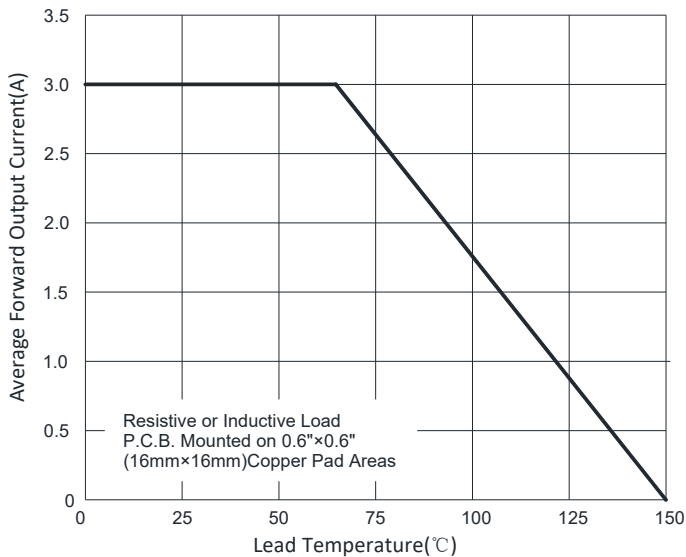


FIG2: Surge Forward Current Capability

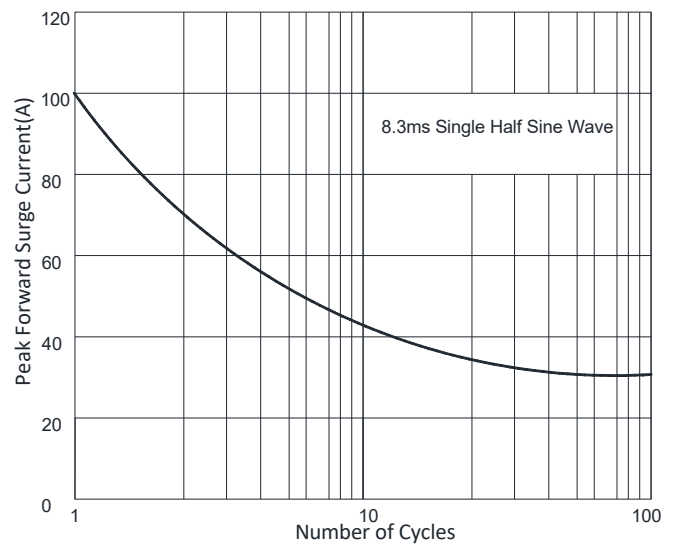


FIG3: Typical Forward Voltage

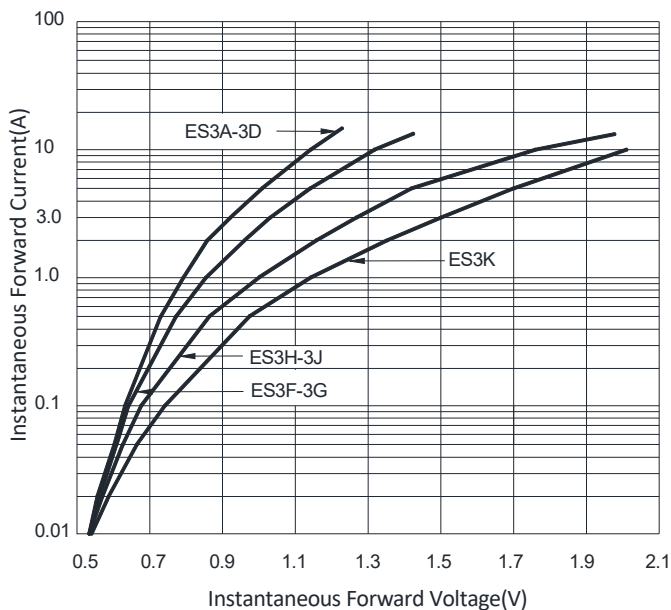


FIG4: Typical Reverse Characteristics

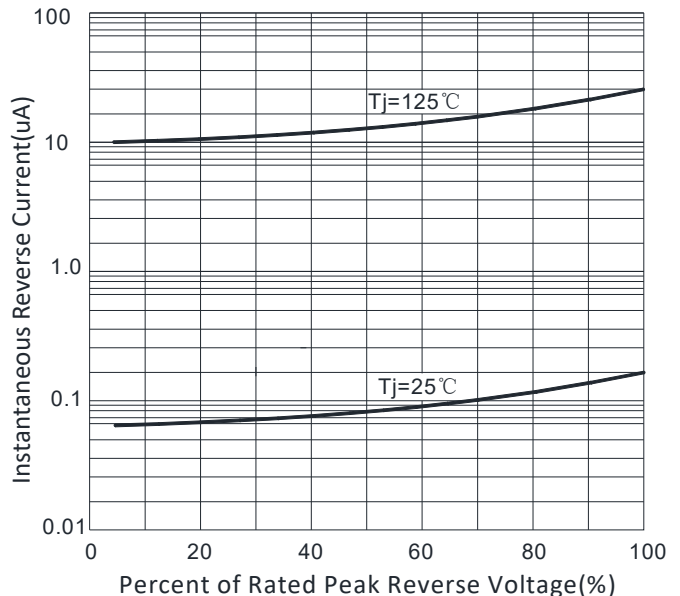
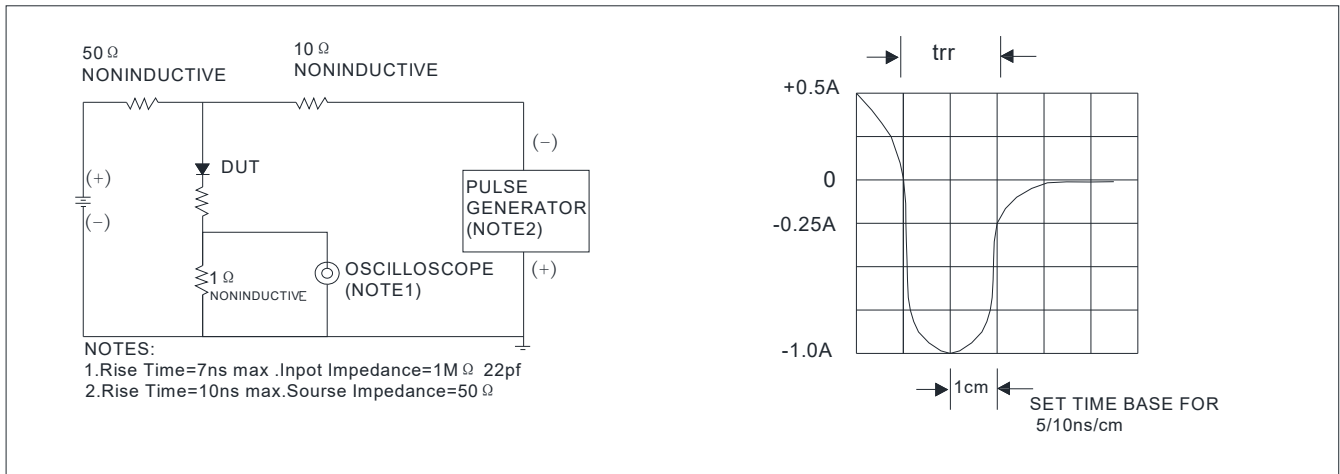




FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMB	3000/REEL	48000	36X35.8X36.5	12.00	11.00