

Surface Mount Rectifier



Features:

- Plastic Package
- For Surface Mounted Applications
- Low Profile Package
- Built-In Strain Relief, Ideal for Automated Placement
- High Temperature Soldering : 250°C/10 seconds at Terminals
- High Current Capability

Mechanical Data

- Case : JEDEC DO-214AA molded plastic over passivated chip
- Terminals : Solder plated, solderable per MIL-STD-750, method 2026
- Polarity : Colour band denotes cathode end
- Weight : 0.003oz, 0.093g

Maximum Ratings and Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

Characteristic	Symbol	S3DB-13-F	S3GB-13-F	S3MB-13-F	Units
Maximum repetitive peak reverse voltage	V_{RRM}	200	400	1,000	V
Maximum RMS voltage	V_{RWS}	140	280	700	V
Maximum DC blocking voltage	V_{DC}	200	400	1,000	V
Maximum average forward rectified current at $T_L=90^\circ\text{C}$	$I_{F(AV)}$	3			A
Peak forward surge current at $T_L = 110^\circ\text{C}$ 8.3 ms single half-sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100			A
Maximum Instantaneous Forward Voltage at 3A	V_F	1.15			V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	10 100			μA
Typical junction capacitance (Note 1)	C_J	35			pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	40			$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150			$^\circ\text{C}$

Note:

(1) Measured at 1MHz and applied reverse voltage of 4V

(2) Thermal resistance from junction to ambient and junction to lead PCB mounted on 0.27" x 0.27" (7 x 7mm²) copper pad areas

FIG.1 – FORWARD DERATING CURVE

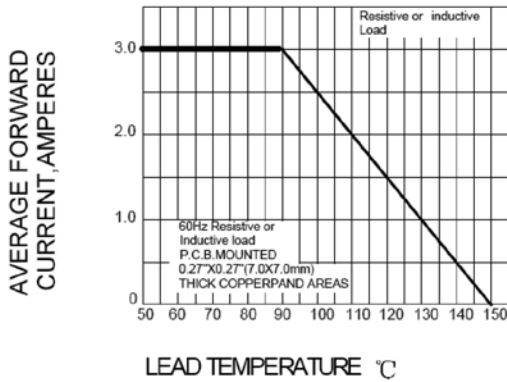


FIG.2 PEAK FORWARD SURGE CURRENT

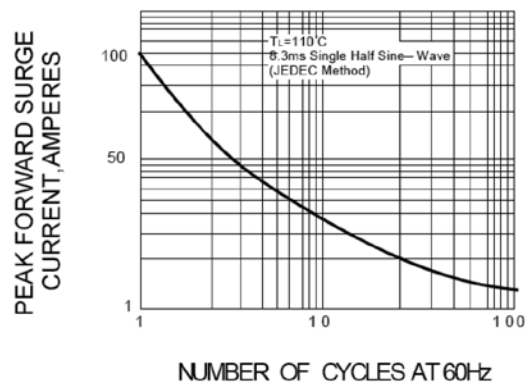


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

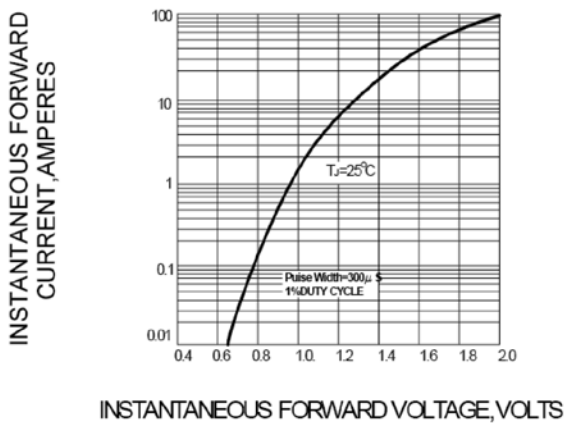


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

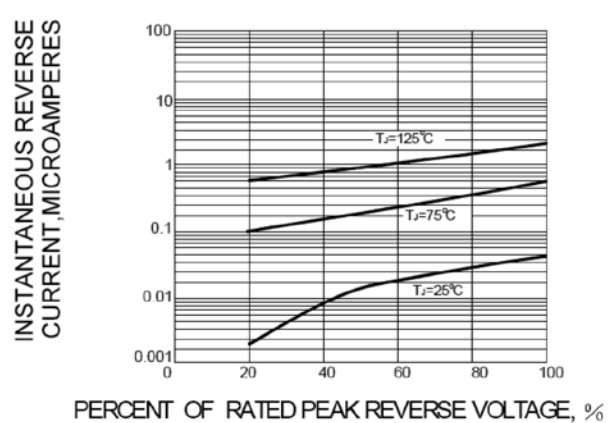
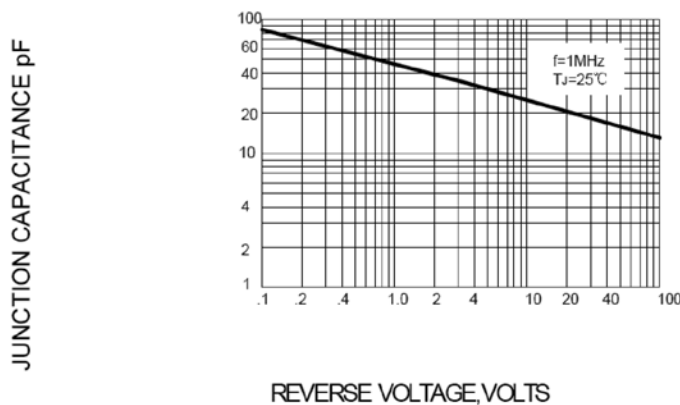


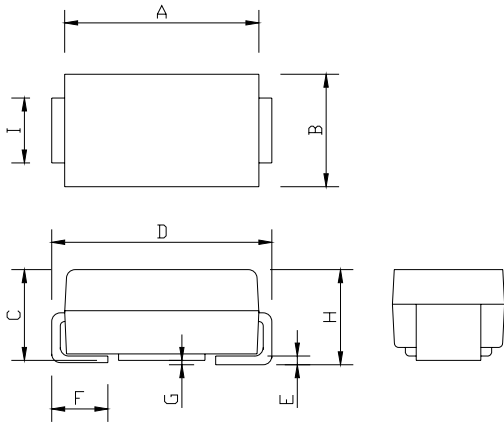
FIG.5-TYPICAL JUNCTION CAPACITANCE



Surface Mount Rectifier



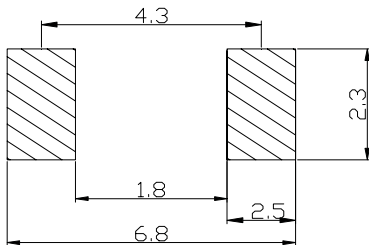
Package Outline Dimensions



DO-214AC(SMA)		
Dim.	Min.	Max.
A	4.3	4.7
B	3.3	3.7
C	2	2.3
D	5.05	5.55
E	0.2 Typ.	
F	0.95	1.55
G	0.2 Max.	
H	2.1	2.5
I	1.85	2.15

Dimensions : Millimetres

Soldering Footprint



Dimensions : Millimetres

Package Information

Device	Package	Shipping
S3DB -13-F S3GB -13-F S3MB -13-F	DO-214AA(SMB)	3,000 / Tape & Reel

Part Number Table

Description	Part Number
Surface Mount Rectifier	S3DB-13-F
	S3GB-13-F
	S3MB-13-F

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