

5.0A Low VF Surface Mount Schottky Barrier Rectifiers -40V-200V

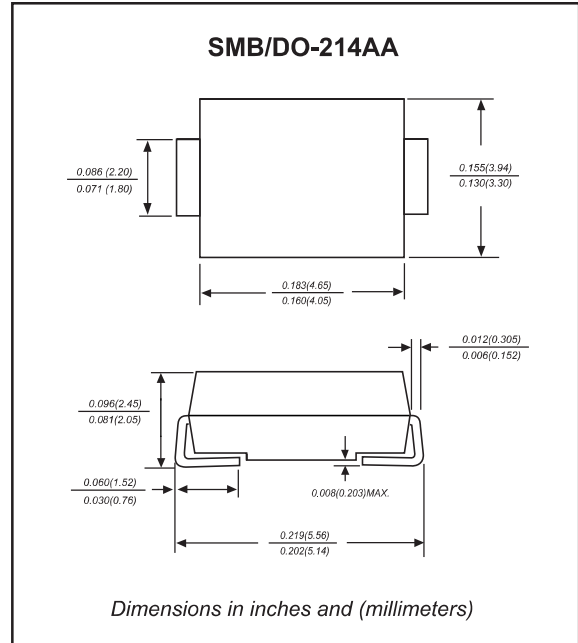
Features

- ▶ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ▶ For surface mounted applications
- ▶ Metal silicon junction, majority carrier conduction
- ▶ Low power loss, high efficiency
- ▶ Built-in strain relief, ideal for automated placement
- ▶ High forward surge current capability
- ▶ High temperature soldering guaranteed: 250°C/10 seconds at terminals
- ▶ Compliant to RoHS Directive 2011/65/EU
- ▶ Suffix "-H" indicates Halogen-free part, ex. SL54-B-H

Mechanical data

- ▶ **Case:** JEDEC DO-214AA molded plastic body
- ▶ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ▶ **Polarity:** Color band denotes cathode end
- ▶ **Mounting Position:** Any
- ▶ **Weight:** 0.003 ounce, 0.093 grams

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	I_O			5.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			120	A
Reverse current	$V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$	I_R			0.5	mA
	$V_R = V_{RRM} \quad T_A = 100^\circ\text{C}$				20	
Thermal resistance	Junction to ambient NOTE 1	$R_{\theta JA}$		30		$^\circ\text{C}/\text{W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		380		pF
Storage temperature		T_{STG}	-65		+150	$^\circ\text{C}$

Note: 1.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

SYMBOLS	V_{RM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	Operating temperature T_J , ($^\circ\text{C}$)
SL54-B	40	28	40	0.47	-55 to +125
SL545-B	45	32	45		
SL55-B	50	35	50	0.55	-55 to +150
SL56-B	60	42	60		
SL58-B	80	56	80	0.75	
SL510-B	100	70	100		
SL515-B	150	105	150	0.85	
SL520-B	200	140	200		

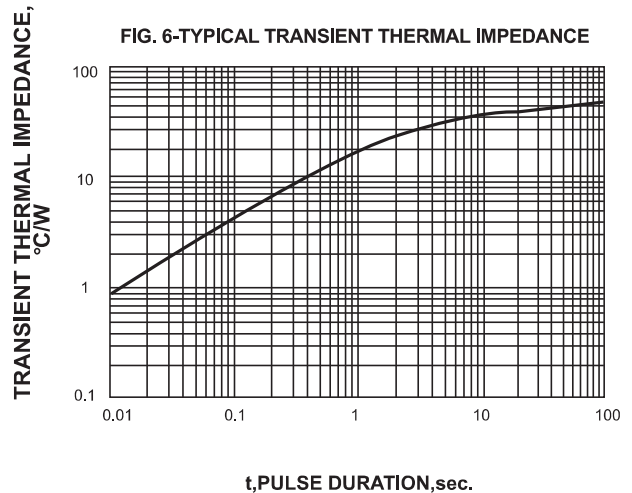
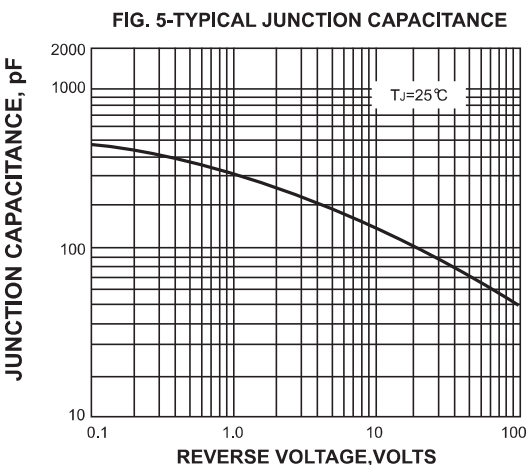
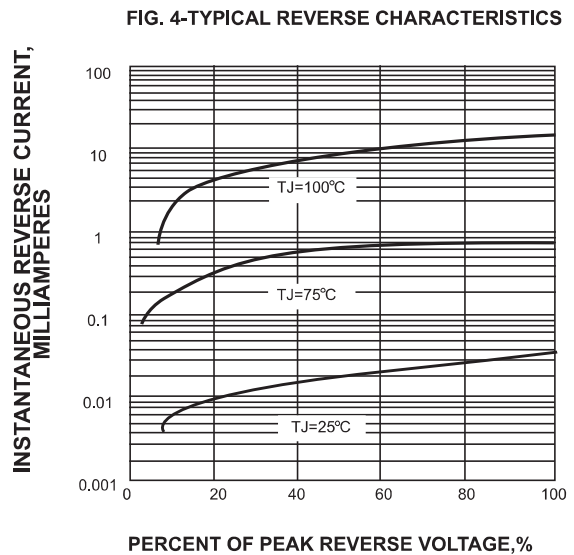
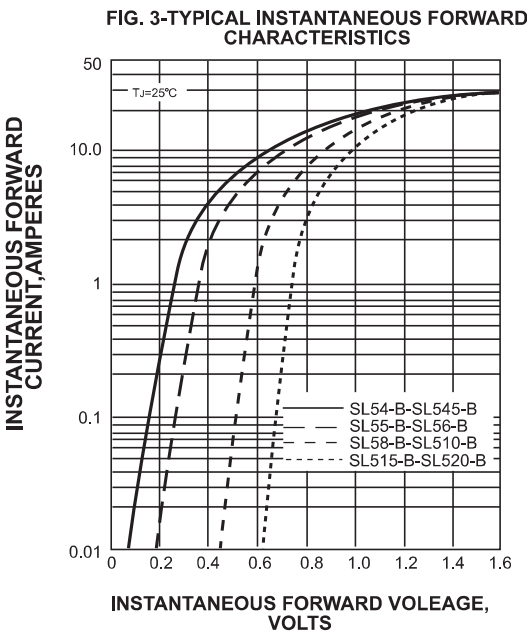
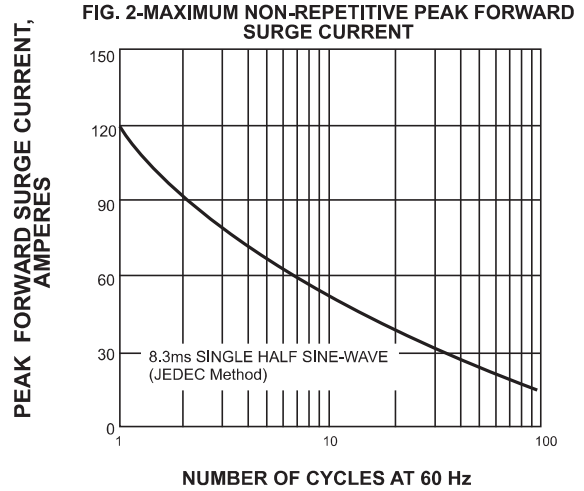
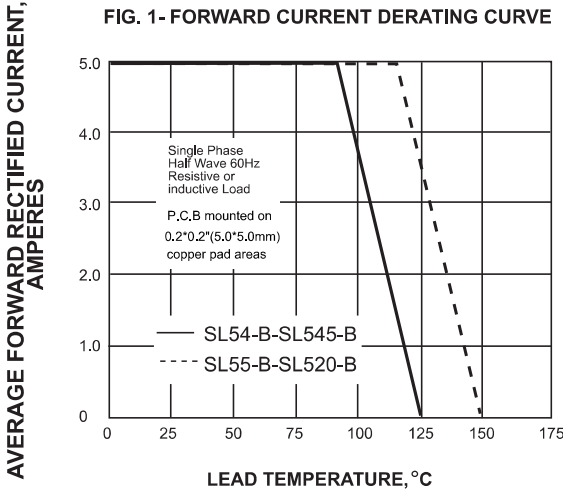
*1 Repetitive peak reverse voltage

*2 RMS voltage



*3 Continuous reverse voltage

*4 Maximum forward voltage@ $I_F=5.0\text{A}$



Rating and characteristic curves



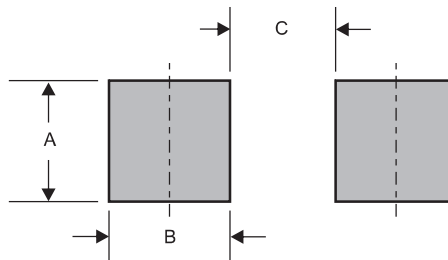
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code	Example	
SL54-B	SL54	For Halogen Device	For Halogen-free Device
SL545-B	SL545		
SL55-B	SL55		
SL56-B	SL56		
SL58-B	SL58		
SL510-B	SL510		
SL515-B	SL515		
SL520-B	SL520		

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMB	0.078 (2.00)	0.059 (1.50)	0.110 (2.80)

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