



SK52U THRU SK525U

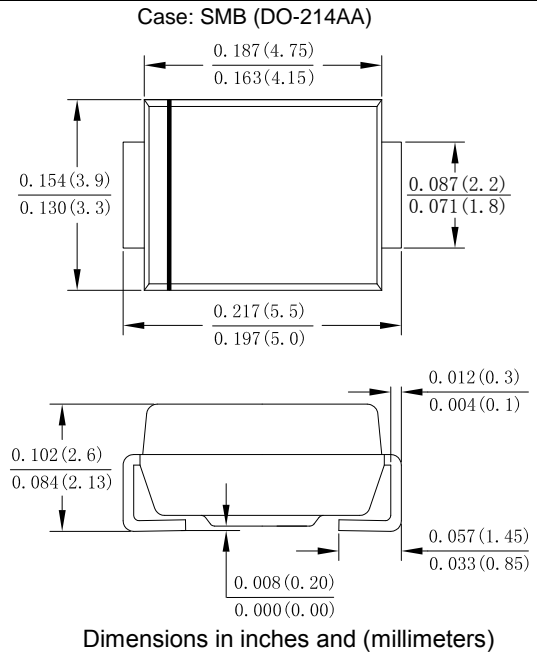
5.0 AMP Surface Mount Schottky Barrier Rectifiers

Features

- Low Power Loss, High Efficiency
- Ideally Suited for Automatic Assembly
- For Use in Low Voltage Application
- Plastic Case Material has UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: Molded plastic SMB
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Marking: Type Number



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load

For capacitive load derate current by 20%

Type Number	SYMBOL	SK 52U	SK 53U	SK 54U	SK 545U	SK 55U	SK 56U	SK 58U	SK 510U	SK 515U	SK 520U	SK 525U	Unit	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	45	50	60	80	100	150	200	250	V	
Maximum RMS Voltage	V_{RMS}	14	21	28	31	35	42	56	70	105	140	175	V	
Maximum DC Blocking Voltage	V_{DC}	20	30	40	45	50	60	80	100	150	200	250	V	
Average Rectified Output Current @ $T_L = 100^\circ\text{C}$	$I_{F(AV)}$	5.0											A	
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	110											A	
Forward Voltage @ $I_F = 5.0\text{A}$	V_{FM}	0.53			0.67			0.82		0.9		0.92		V
Maximum Forward Power Dissipation	P_D	2.65			3.35			4.1		4.5		4.6		W
Peak Reverse Current @ $T_A = 25^\circ\text{C}$	I_R	0.1						0.05						mA
At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$		10						5						
I^2t Rating for fusing ($t < 8.3\text{ms}$)	I^2t	50.21											A^2s	
Typical Junction Capacitance (Note 1)	C_J	220						110						pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	94.5											$^\circ\text{C/W}$	
	$R_{\theta JC}$	20.5												
	$R_{\theta JL}$	14.5												
Operating Temperature Range	T_J	-55 to +150											$^\circ\text{C}$	
Storage Temperature Range	T_{STG}	-55 to +150											$^\circ\text{C}$	

Note:

1. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C
2. Thermal Resistance from Junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas.



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Fig. 1 Forward Current Derating Curve

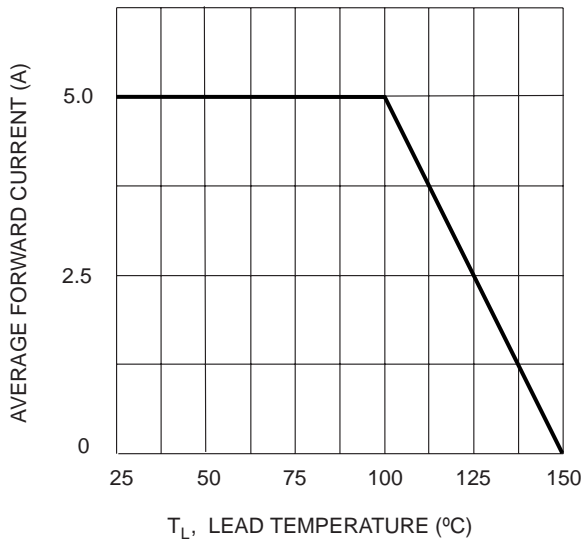


Fig. 2 Typ. Forward Characteristics

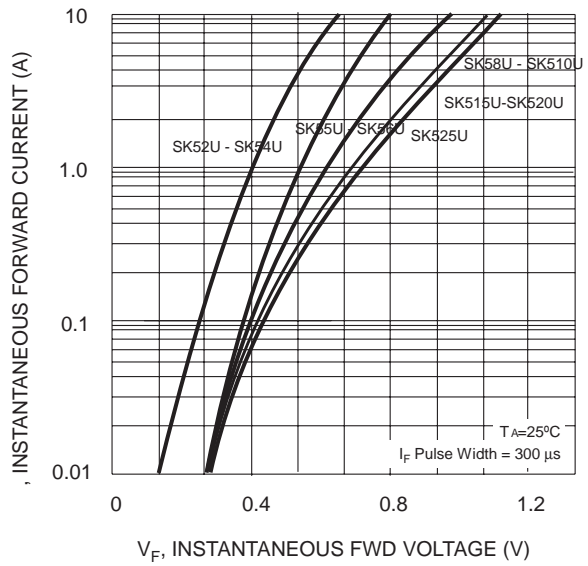


Fig. 4 Typical Reverse Characteristic

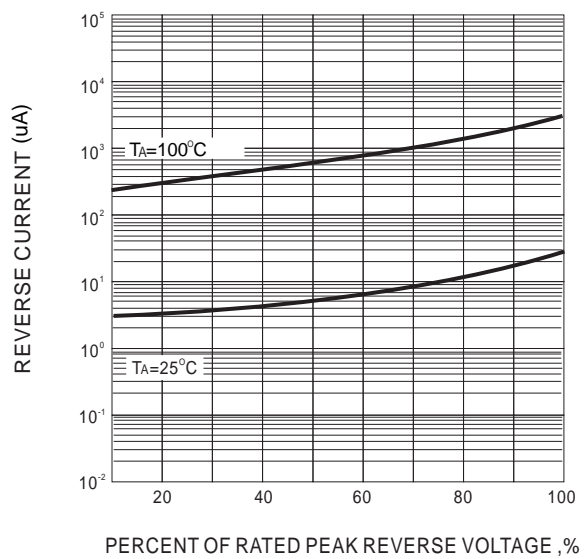


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

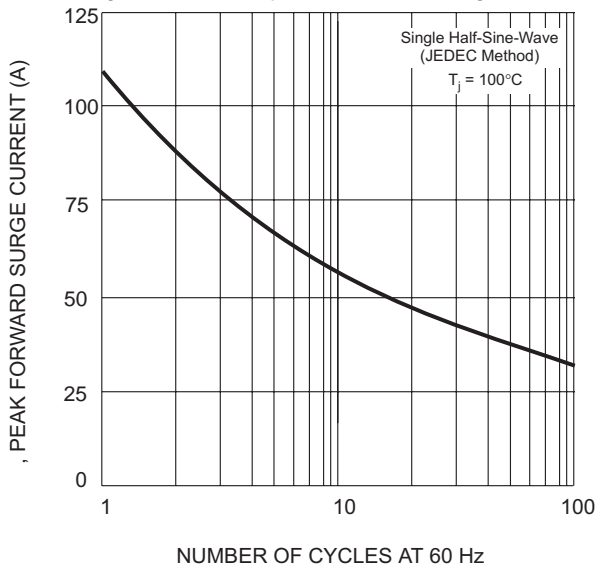
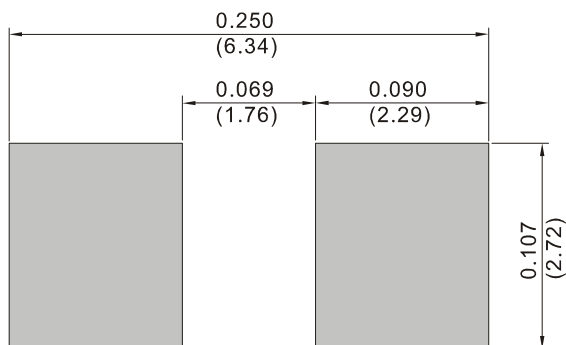


FIG.5 MOUNTING PAD LAYOUT





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