

**SEMTECH**

**STANDARD RECOVERY  
HIGH VOLTAGE  
RECTIFIER ASSEMBLY**

**SCKV100K3  
SCKV150K3  
SCKV200K3**

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**HIGH DENSITY, HIGH VOLTAGE, STANDARD RECOVERY RECTIFIER ASSEMBLY**

**QUICK REFERENCE DATA**

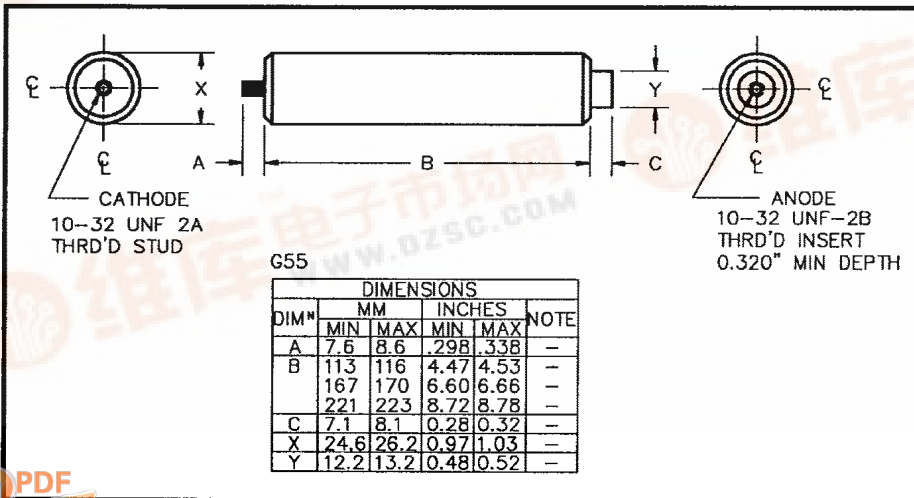
- High reverse voltages
- Low reverse leakage current
- Low distributed and ground capacitance
- Corona free design
- Air or oil environments

- $V_R = 100 - 200kV$
- $I_F = 100mA$
- $t_{rr} = 2.5\mu S$
- $I_R = 1.0\mu A$

**ABSOLUTE MAXIMUM RATINGS**

	Symbol	SCKV100K3	SCKV150K3	SCKV200K3	Unit
Working reverse voltage	$V_{RWM}$	100	150	200	kV
Surge reverse voltage	$V_{RSM}$	110	165	220	kV
Average forward current in air @ 25°C in oil @ 55°C in forced air 600 CFM	$I_{F(AV)}$	← 100 →	← 300 →	← 200 →	mA mA mA
Non-repetitive surge current $t_p = 8.3mS, @ 25°C$	$I_{FSM}$	← 25 →			A
Storage temperature range	$T_{STG}$	← -55 to +150 →			°C
Operating temperature range	$T_{OP}$	← -55 to +150 →			°C
Body length Max.	dim B	4.53	6.66	8.78	inches

**MECHANICAL**



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## ELECTRICAL CHARACTERISTICS

	Symbol	SCKV100K3	SCKV150K3	SCKV200K3	Unit
Max. forward voltage drop @ $I_F = 100\text{mA}$ , $T_j = 25^\circ\text{C}$	$V_F$	120	190	250	V
Max. reverse leakage current @ $V_{RWM}$ , $T_j = 25^\circ\text{C}$	$I_R$	←————→	1.0	————→	$\mu\text{A}$
@ $V_{RWM}$ , $T_j = 100^\circ\text{C}$	$I_R$	←————→	20	————→	$\mu\text{A}$
Max. reverse recovery time 50mA $I_F$ to 100mA $I_R$ . Recovers to 25mA $I_{RR}$ .	$t_{rr}$	←————→	2.5	————→	$\mu\text{S}$
Max. fusing current $t_p = 8.3\text{mS}$	$I^2t$	←————→	2.6	————→	$\text{A}^2\text{S}$

1. Measured on discrete devices prior to assembly

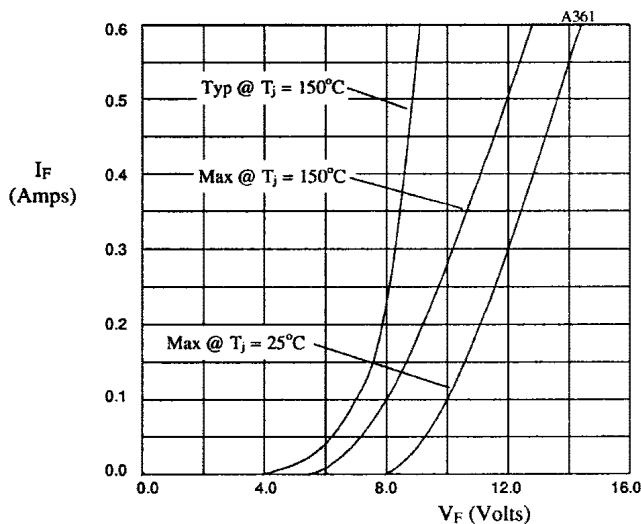


Fig 1. Forward voltage drop as a function of forward current for use with multiplication table.

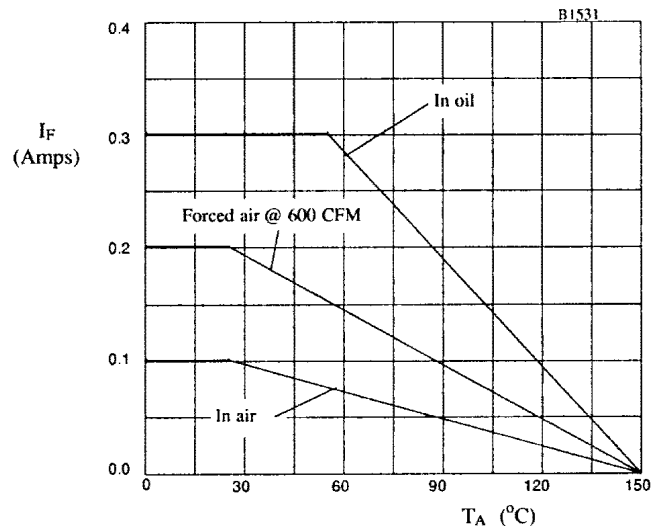


Fig 2. Maximum average forward current against ambient temperature.

Multiplication tables for fig 1.

SCKV100K3	X-axis x12
SCKV150K3	X-axis x19
SCKV200K3	X-axis x25