

January 8, 1998

TEL:805-498-2111 FAX:805-498-3804 WEB:http://www.semtech.com

HIGH DENSITY, HIGH VOLTAGE, STANDARD RECOVERY RECTIFIER ASSEMBLY

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

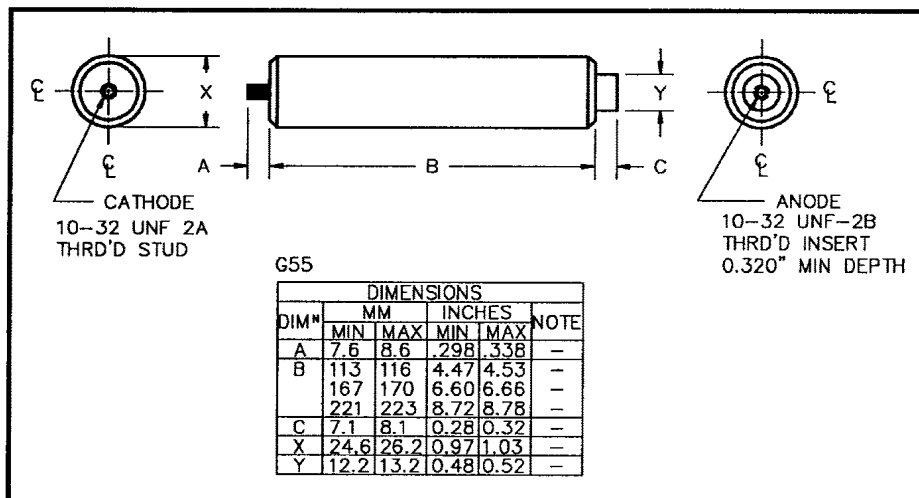
QUICK REFERENCE DATA

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

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	$I_{F(AV)}$	← 100 →			mA
in oil @ 55°C		← 300 →			mA
in forced air 600 CFM		← 200 →			mA
Non-repetitive surge current $t_p = 8.3\text{ms}$, @ 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	→	μA
@ V_{RWM} , $T_j = 100^\circ\text{C}$	I_R	←	20	→	μA
Max. reverse recovery time 50mA I_F to 100mA I_R . Recovers to 25mA I_{RR} .	t_{rr}	←	2.5	→	μs
Max. fusing current $t_p = 8.3\text{ms}$	I^2t	←	2.6	→	A^2S

1. Measured on discrete devices prior to assembly

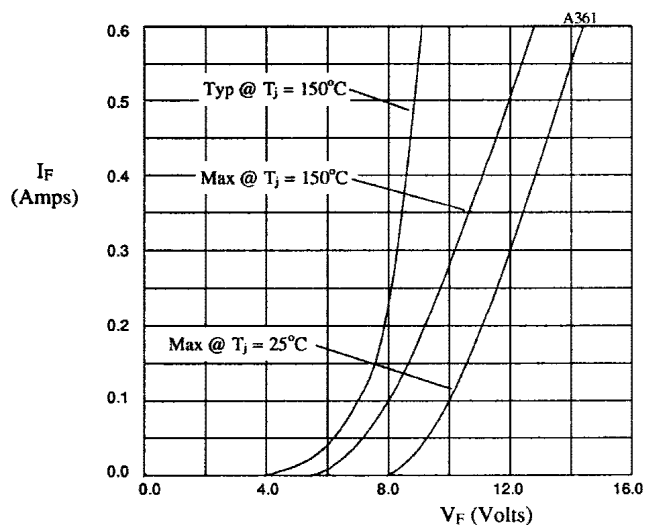


Fig 1. Forward voltage drop as a function of forward current for use with multiplication table.

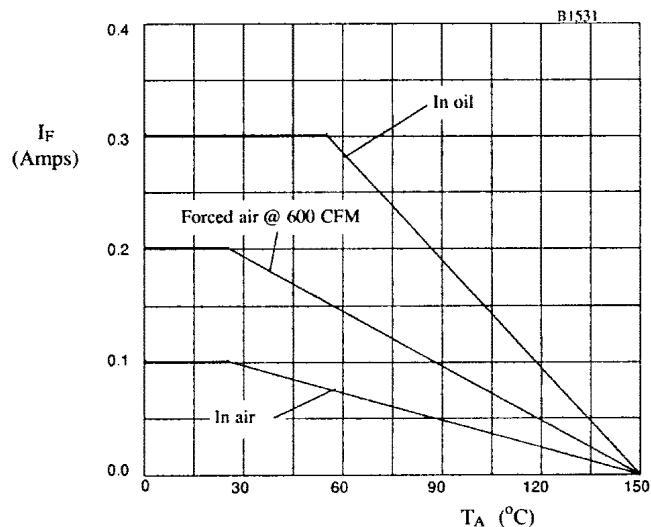


Fig 2. Maximum average forward current against ambient temperature.

Multiplication tables for fig 1.

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