

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

## QUICK REFERENCE DATA

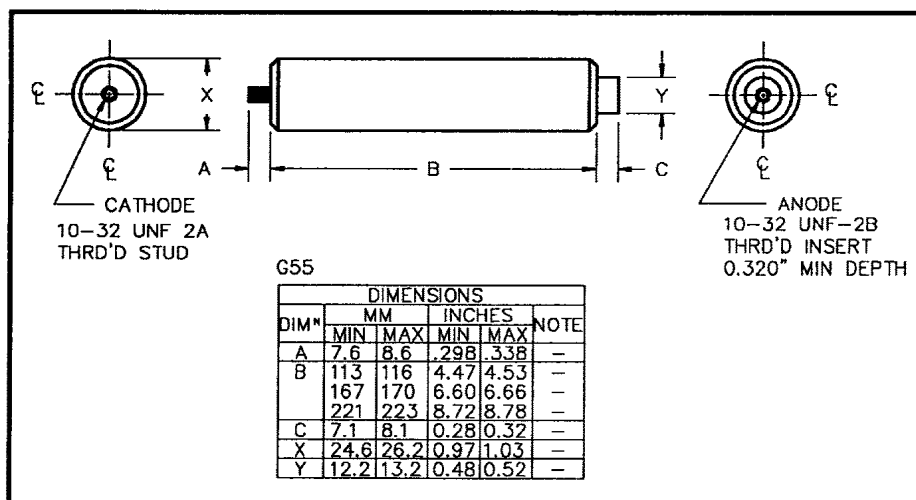
- High reverse voltages
- Low reverse leakage current
- Low distributed and ground capacitance
- Corona free design
- Air or oil environments

- $V_R = 12\text{kV} - 25\text{kV}$
- $I_F = 1.0\text{A}$
- $t_{rr} = 2.0\mu\text{S}$
- $I_R = 1.0\mu\text{A}$

## ABSOLUTE MAXIMUM RATINGS

	Symbol	SCKV12K40	SCKV18K40	SCKV25K40	Unit
Working reverse voltage	$V_{RWM}$	12	18	25	kV
Surge reverse voltage	$V_{RSM}$	13.2	19.8	27.5	kV
Average forward current in air @ 25°C in oil @ 55°C in forced air 600 CFM	$I_{F(AV)}$	← 1.0 →	← 3.0 →	← 2.0 →	A
Non-repetitive surge current $t_p = 8.3\text{ms}$ , @ 25°C	$I_{FSM}$	← 150 →			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	SCKV12K40	SCKV18K40	SCKV25K40	Unit
Max. forward voltage drop @ $I_F = 3.0A$ , $T_j = 25^\circ C$	$V_F$	12.0	19.0	25.0	V
Max. reverse leakage current @ $V_{RWM}$ , $T_j = 25^\circ C$	$I_R$	←—————	1.0 —————→	—————→	$\mu A$
@ $V_{RWM}$ , $T_j = 100^\circ C$	$I_R$	←—————	20 —————→	—————→	$\mu A$
Max. reverse recovery time <sup>1</sup> 0.5A $I_F$ to 1.0A $I_R$ . Recovers to 0.25A $I_{RR}$ .	$t_{rr}$	←—————	2.0 —————→	—————→	$\mu S$
Max. fusing current $t_p = 8.3mS$	$I^2t$	←—————	92 —————→	—————→	$A^2S$

1. Measured on discrete devices prior to assembly

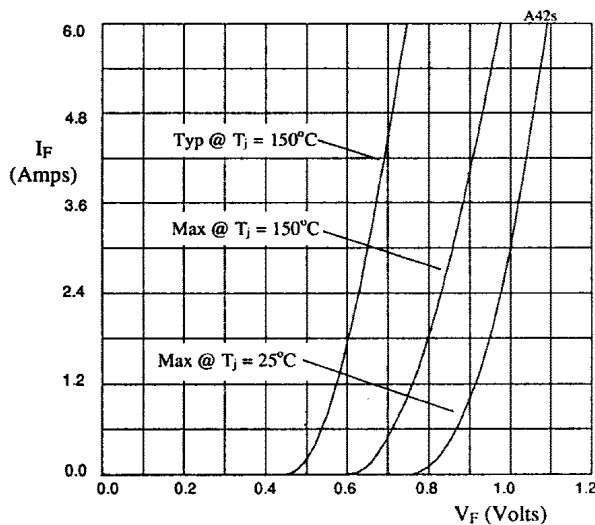


Fig 1. Forward voltage drop as a function of forward current for use with multiplication table.

Multiplication tables for fig 1.

SCKV12K40	X-axis x12
SCKV18K40	X-axis x19
SCKV25K40	X-axis x25

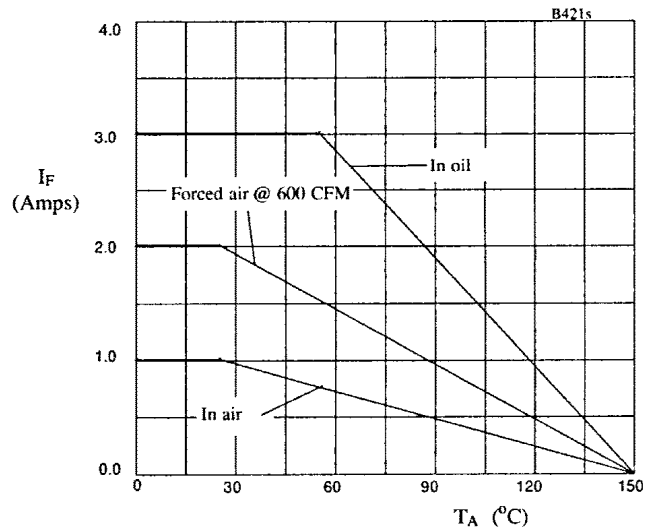


Fig 2. Maximum average forward current against ambient temperature.