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

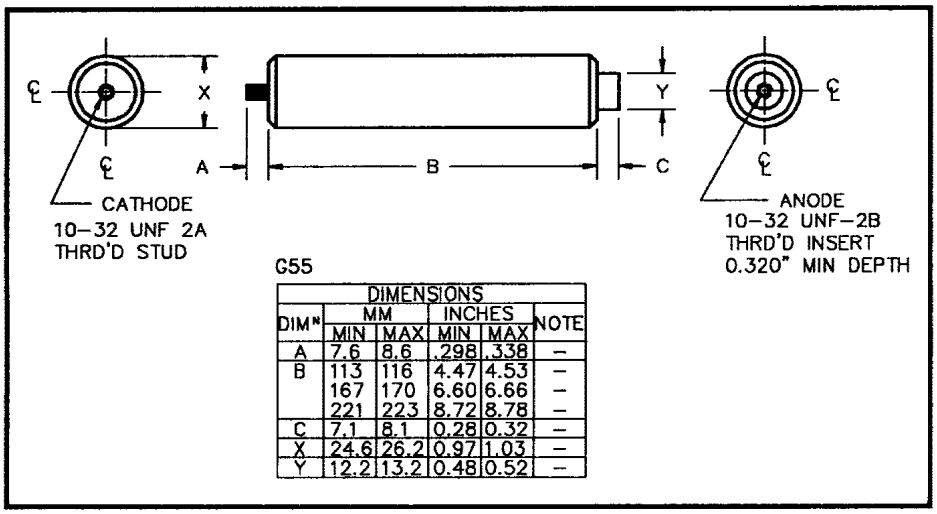
QUICK REFERENCE DATA

- V_R = 12kV - 25kV
- I_F = 1.0A
- t_{rr} = 2.0µS
- I_R = 1.0µA

ABSOLUTE MAXIMUM RATINGS

	Symbol	SCKV12K30	SCKV18K30	SCKV25K30	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	$I_{F(AV)}$	← 1.00 →			A A A
Non-repetitive surge current t_p = 8.3mS, @ 25°C	I_{FSM}	← 50.0 →			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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DIM	DIMENSIONS MM MIN	MM MAX	INCHES MIN	INCHES MAX	NOTE
A	7.6	8.6	.298	.338	–
B	113	116	4.47	4.53	–
	167	170	6.60	6.66	–
	221	223	8.72	8.78	–
C	7.1	8.1	0.28	0.32	–
X	24.6	26.2	0.97	1.03	–
Y	12.2	13.2	0.48	0.52	–

ELECTRICAL CHARACTERISTICS

	Symbol	SCKV12K30	SCKV18K30	SCKV25K30	Unit
Max. forward voltage drop @ I_F = 1.0A, T_j = 25°C	V_F	13.2	20.9	27.5	V
Max. reverse leakage current @ V_{RWM}, T_j = 25°C	I_R	←	1.0	→	µA
@ V_{RWM}, T_j = 100°C	I_R	←	25	→	µA
Max. reverse recovery time 0.5A I_F to 1.0A I_R. Recovers to 0.25A I_{RR}.	t_{rr}	←	2.0	→	µS
Max. fusing current t_p = 8.3mS	I^2t	←	10.4	→	A^2S

1. Measured on discrete devices prior to assembly

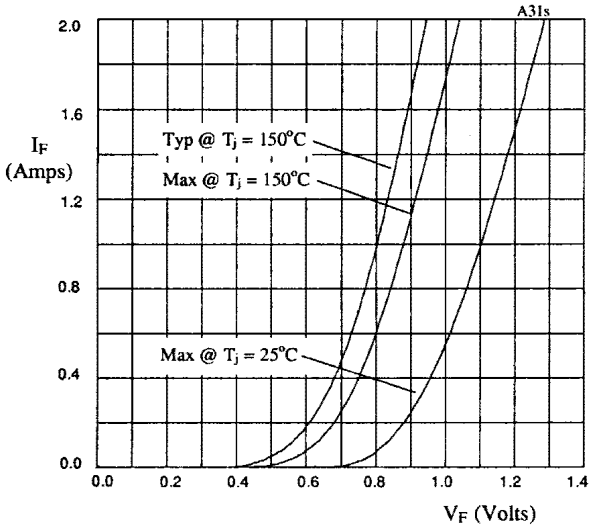

Fig 1. Forward voltage drop as a function of forward current for use with multiplication table.

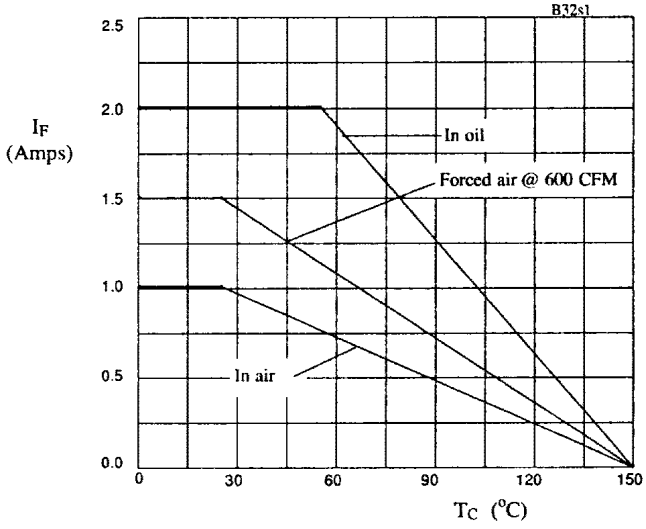

Fig 2. Maximum average forward current against ambient temperature.

Multiplication tables for fig 1.

SCKV12K30	X-axis x12
SCKV18K30	X-axis x19
SCKV25K30	X-axis x25