

SEMTECH

**SUPERFAST RECOVERY 1 PHASE
FULL WAVE BRIDGE RECTIFIERS**

**SCBK05FF
SCBK10FF
SCBK15FF**

January 16, 1998

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**SUPERFAST RECOVERY, HIGH CURRENT 1-PHASE
FULL WAVE BRIDGE RECTIFIER ASSEMBLIES**

**QUICK REFERENCE
DATA**

- Low forward voltage drop
- Low reverse leakage current
- Low thermal impedance
- Very fast reverse recovery time
- High surge ratings

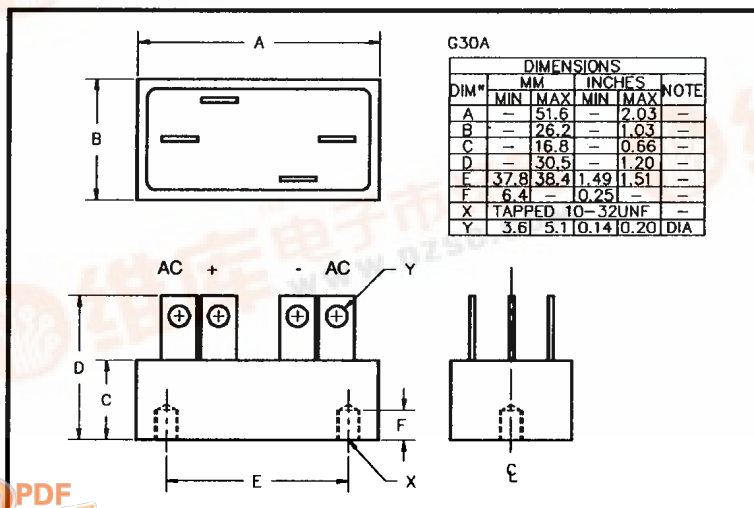
- $V_R = 50V - 150V$
- $I_F = 38A$
- $V_F = 0.97V$
- $t_{rr} = 30ns$

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_F(AV)$						1 Cycle Surge Current I_{FSM} $t_p = 8.3mS$		Repetitive Surge Current I_{FRM}
		(@ case temperature)			(@ ambient temperature)					
		@ 55°C	@ 100°C	@ 125°C	@ 25°C	@ 55°C	@ 100°C	@ 25°C	@ 100°C	@ 25 °C
	Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps
SCBK05FF	50									
SCBK10FF	100	38	28	20	13	9.2	5.5	600	500	80
SCBK15FF	150									

$$R_{\theta JC} = 1.2^{\circ}C/W$$

MECHANICAL



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ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current I_R @ V_{RWM}		Maximum Forward Voltage V_F @ 20A/leg	Reverse Recovery Time ¹ t_{rr} @ 25°C	Maximum operating & storage temp. range. T_{OP} T_{STG}
	@ 25°C	@ 100°C			
	μA	mA	Volts	nS	°C
SCBK05FF SCBK10FF SCBK15FF	80	4.0	0.97	30	-55 to +150

¹ Measured on discrete devices prior to assembly

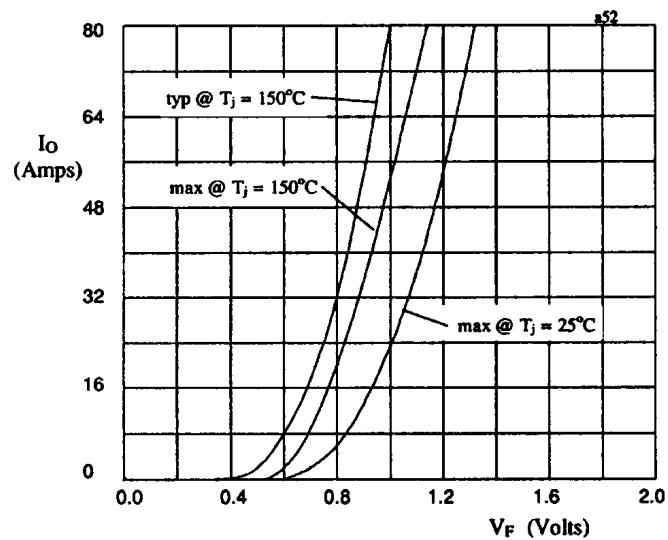


Fig 1. Forward voltage drop against output current per leg.

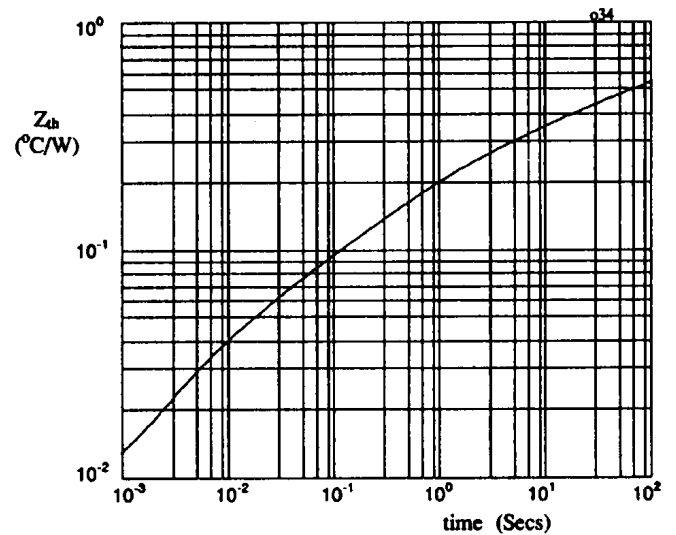


Fig 2. Transient thermal impedance characteristic per leg