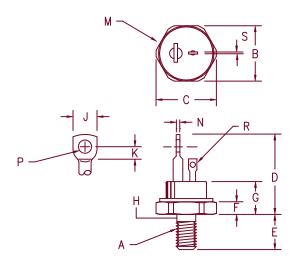
# Silicon Controlled Rectifier Series 40C



Note 1: 1/4-28 UNF-3A

Note 2: Full thread within 2 1/2 threads

Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
Α					1
В	.677	.685	17.20	17.40	
С		.770		19.56	
D	1.200	1.250	30.48	31.75	
Ε	.427	.447	10.84	11.35	
F	.115	.155	2.92	3.94	
G		.515		13.08	
Н		.249		6.32	2
J	.200	.300	5.08	7.62	
K	.120		3.05		
М		.667		16.94	Dia.
N	.065	.085	1.65	2.15	
Р	.145	.155	3.68	3.93	Dia.
R	.055	.065	1.40	1.65	
S	.025	.030	.64	.76	

TO-208AC (TO-65)

Microsemi Catalog Number	Forward & Reverse Repetitive Blocking VDRM, VRRM	Reverse Transient Blocking
40C20B	200	300
40C40B	400	500
40C60B	600	700
40C80B	800	900
40C100B	1000	1100
40C120B	1200	1300

- dv/dt-200 V/usec
- 1000 Amperes surge current
- Economical for medium power applications
- Compact TO-208AC package

### Electrical Characteristics

Max. RMS on-state current Max. average on-state cur. Max. peak on-state voltage Max. holding current Max. peak one cycle surge current	T(RMS) 63 Amps T(AV) 40 Amps VTM 3.0 Volts H 200 mA TSM 1000 A	TC = 102°C TC = 102°C TM = 500 A(peak) TC = 120°C, 60Hz
Max. I <sup>2</sup> t capability for fusing	I <sup>2</sup> t 4100A <sup>2</sup> S	t = 8.3  ms

#### Thermal and Mechanical Characteristics -65°C to 125°C Operating junction temp range TSTG -65°C to 150°C Storage temperature range Rejc 0.35°C/W Junction to case Maximum thermal resistance R<sub>OCS</sub> Typical thermal resistance 0.20° C′/W Case to sink Mounting torque 25-30 inch pounds Weight 0.56 ounces (16 grams) typical

40C

## $T_J = 25$ °C unless otherwise indicated

Switching					
	di/dt 200A/usec. t <sub>d</sub> 3.0 usec. t <sub>q</sub> 100 usec.	$TJ = 125^{\circ} C$ $TJ = 125^{\circ} C$			
Note 1:  TM = 50A, VD = VDRM. Note 2:  TM = 50A, di/dt = 5A/us reapplied dv/dt = 20V/use	GT = 12V open circuit, 20 ohm-0 sec., VR during turn-off interval = ec., linear to rated VDRM, VGT = C	0.1 usec. rise time 50V min., OV			

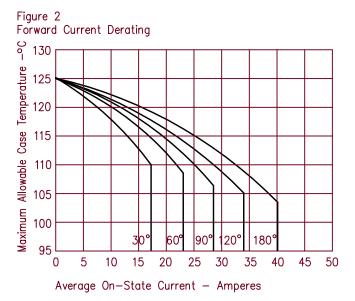
	Triggering		
Max. gate voltage to trigger Max. nontriggering gate voltage Max. gate current to trigger Max. peak gate power	V <sub>GT</sub> V <sub>GD</sub> I GT P <sub>GM</sub>	3.0V 0.25V 100mA 10W	TJ = 125° C
Average gate power  Max. peak gate current  Max. peak gate voltage (forward)  Max. peak gate voltage (reverse)	PG(AV) I GM VGM VGM	1.0W 3.0A 20V 10V	$t_p = 10$ usec.

	Blocking		
Max. leakage current	IDRM	6mA	$_{J}^{T} = 125^{\circ} \text{C} \& _{V}^{V} \text{DRM}$ $_{J}^{T} = 125^{\circ} \text{C} \& _{V}^{V} \text{RRM}$ $_{J}^{T} = 125^{\circ} \text{C}$
Max. reverse leakage	IRRM	6mA	
Critical rate of rise of off-state voltage	dv/dt	200V/usec.	

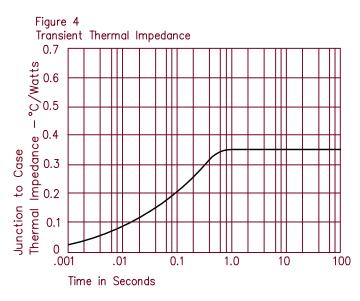
# 400

Figure 3

Figure 1 Typical Forward On-State Characteristics 10000 8000 6000 4000 2000 1000 800 600 400 Instantaneous On—State Current — Amperes 200 100 80 60 40 20 10 8. 1.2 2.0 2.4 2.8 3.2 3.6 1.6 Instantaneous On-State Voltage - Volts







Average On-State Current - Amperes

