

CRYDOM COMPANY

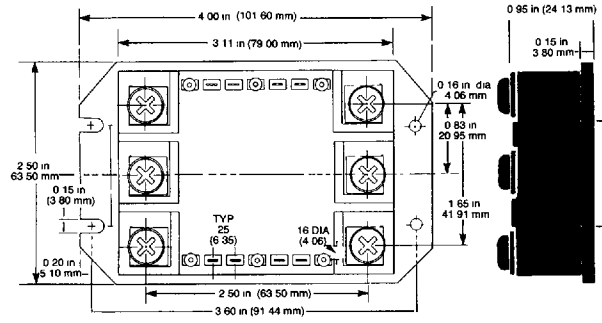
POWER MODULES

SERIES EF

35A-150A SCR/DIODE CIRCUITS

Part Numbering System Example: EFE19C-F

Package Code	Current Code (Amperes)* 1φ 3φ ACSW	Circuit Code	Voltage Code	Option Code
EF (Ceramic Base)	C 35 50 40 D 50 75 55 E 75 100 90 F 100 150 110 G 125 150 125	01 1φ Com. Cath 02 1φ Com. Anode 04 1φ 4 SCR 05 Single AC Sw 16 3φ 6 SCR 17 3φ 3 SCR 18 3 AC Sw 19 3φ 3 diode/3 SCR 20 3φ 3 diode/3 SCR 1/2 control	U 100 A 200 B 400* C 600* D 800 E 1000 F 1200* G 1400	S Suppressor (internal) SE Suppressor (external) F Free Wheel
*All values are for full conduction. AC Switch values are RMS Amperes			*For ckts. 1 through 5 B = 120V Line C = 240V Line F = 480V Line	



ELECTRICAL SPECIFICATIONS (all tested @25°C unless otherwise indicated)*

*Values shown are ratings for the individual semiconductor cells used in the module

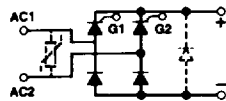
Parameter	Spec. Code:	C	D	E	F	G	Units
Surge (non-rep)	I_{TSM}	300	400	600	1500	1950	Amperes (one cycle; 60 Hz)
Fusing	I^2t	370	650	1500	9340	15,800	A ² second (< 8.3 ms.)
Forward Drop (pk.)	V_{TM}	1.7@50A	1.7@70A	1.8@100A	1.8@150A	1.7@150A	Volts, peak; (pulse)
Leakage current	I_{DRM}, I_{FRM}	8.0	10.0	15.0	20.0	20.0	Milliamperes
Gate trigger	$I_{GT(max)}$	100	100	100	120	150	Milliamperes
Trigger voltage	$V_{GT(max)}$	2.5	2.5	3.0	3.0	3.0	Volts
Peak gate power	P_{GM}	5.0	5.0	5.0	7.0	10.0	Watts
Voltage Rate of Rise	dv/dt	100	100	200	200	200	Volts/microsecond ^① exponential
Current Rate of Rise	di/dt			100			Amps/microsecond ^②
Max. operating temp.	$T_J(max)$			125°			Centigrade
Min. operating temp.	$T_J(min.)$			-40°			Centigrade
Thermal resistance	RO_{JC}	0.5	0.5	0.4	0.25	0.15	°C/W chip to baseplate
Thermal resistance	RO_{CS}			0.3			°C/W base to heatsink (with heatsink compound)

Recommended mounting Ms screw
 1) $T_c = 125^\circ C$, exponential to 80% rated VDRM 2) Gate pulse: 20V, 15Ω source, $t_r = 0.1 \mu s$

UL RECOGNIZED

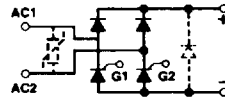
EF Series Available Circuits

CIRCUIT NO. 1



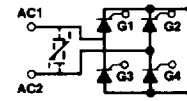
Single phase, common cathode (50 Amperes and above)

CIRCUIT NO. 2



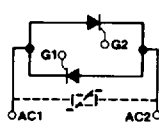
Single phase, common anode (50 Amperes and above)

CIRCUIT NO. 4



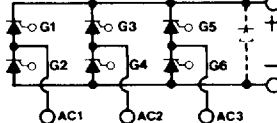
Single phase, quad SCR (50 Amperes and above)

CIRCUIT NO. 5



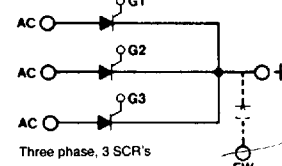
Single phase, AC Switch (50 Amperes and above)

CIRCUIT NO. 16



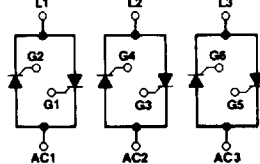
Three phase, full converter, 6 SCR's
*Optional Free Wheel diode on EFC, EFD Series

CIRCUIT NO. 17



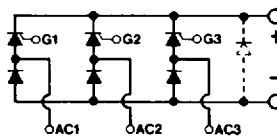
Three phase, 3 SCR's

CIRCUIT NO. 18



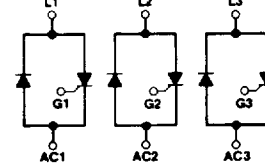
Triple AC, Switch

CIRCUIT NO. 19



Three phase, semi-converter
*Optional Free Wheel diode on EFC, and EFD Series

CIRCUIT NO. 20



Hybrid Triple Switch