

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

## CR70U-010 SERIES

70 AMP ULTRA FAST  
RECOVERY SILICON RECTIFIER  
100 THRU 800 VOLTS

JEDEC DO-5 CASE

### DESCRIPTION

The CENTRAL SEMICONDUCTOR CR70U-010 Series types are 70 Amp stud mounted ultra fast recovery silicon rectifiers which are high quality, well constructed, highly reliable components designed for use in all types of military, commercial, industrial, entertainment, computer, and automotive applications.

### MAXIMUM RATINGS (T<sub>C</sub> = 25°C unless otherwise noted)

	SYMBOL	CR70U							UNITS
		-010	-015	-020	-040	-060	-080	CR70U	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	100	150	200	400	600	800	V	
DC Blocking Voltage	V <sub>R</sub>		100	150	200	400	600	800	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>		70	105	140	280	420	560	V
Average Forward Current (T <sub>C</sub> = 120°C)	I <sub>D</sub>		70	70	70	70	70	70	A
Peak Forward Surge Current	I <sub>FSM</sub>		1000	1000	1000	-	-	-	A
Peak Forward Surge Current	I <sub>FSM</sub>		-	-	-	800	-	-	A
Peak Forward Surge Current	I <sub>FSM</sub>		-	-	-	-	700	700	A
Operating and Storage									
Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>					-65 to +175			°C
Thermal Resistance	Q <sub>JC</sub>					0.8			°C/W

### ELECTRICAL CHARACTERISTICS (T<sub>C</sub> = 25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	CR70U-010		CR70U-020		CR70U-060		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
V <sub>F</sub>	I <sub>F</sub> = 70A			0.975	1.30		1.35	V
I <sub>R</sub>	V <sub>R</sub> = Rated V <sub>RRM</sub>			25		25	25	μA
I <sub>R</sub>	V <sub>R</sub> = Rated V <sub>RRM</sub> , T <sub>C</sub> = 125°C			3.0		3.0	3.0	mA
t <sub>rr</sub>	I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, Recov to 0.25A			50		75	100	ns

NOTE: Normal Polarity: Cathode to Stud (Case)  
For Reverse Polarity add "R" Suffix (Ex: CR70U-040R)