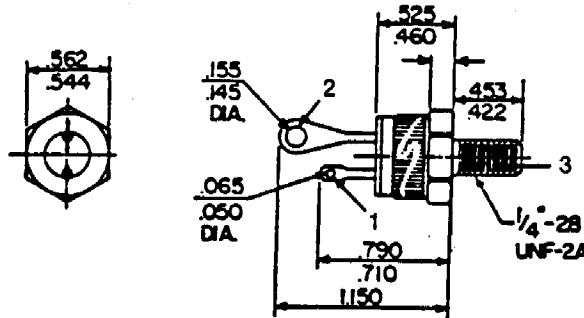


# C35 SERIES



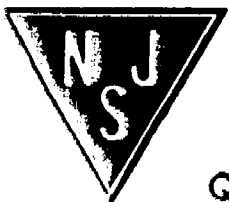
Rating	Symbol	Value	Unit
Peak Repetitive Forward and Reverse Blocking Voltage (1) ( $T_C = -65$ to $+125^\circ\text{C}$ )	$V_{DRM}$ or $V_{RRM}$	25 50 100 150 200 250 300 400 500 600 700 800	Volts
C35U		25	
C35F		50	
C35A		100	
C35G		150	
C35B		200	
C35H		250	
C35C		300	
C35D		400	
C35E		500	
C35M		600	
C35S		700	
C35N		800	

**MAXIMUM RATINGS — continued** ( $T_J = 125^\circ\text{C}$  unless otherwise noted.)

Rating	Symbol	Value	Unit
RMS On-State Current (All Conduction Angles)	$I_T(\text{RMS})$	35	Amps
Peak Non-Repetitive Surge Current (One cycle, 60 Hz)	$I_{TSM}$	225	Amps
Circuit Fusing ( $t = 1$ to $8.3$ ms)	$I^2t$	75	$\text{A}^2\text{s}$
Peak Gate Power	PGM	5	Watts
Average Gate Power	$PG(\text{AV})$	0.5	Watt
Peak Reverse Gate Voltage	$V_{GRM}$	5	Volts
Operating Junction Temperature Range	$T_J$	$-65$ to $+125$	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	$-65$ to $+150$	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.7	$^\circ\text{C/W}$



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

**ELECTRICAL CHARACTERISTICS** ( $T_J = 25^\circ\text{C}$  unless otherwise noted.)

Characteristic		Symbol	Min	Typ	Max	Unit
*Peak Forward Blocking Current ( $V_D = \text{Rated } V_{DRM} @ T_C = +125^\circ\text{C}$ )	C35U,F,A,G	$I_{DRM}$ or $I_{RRM}$	—	—	13	mA
	C35B		—	—	12	
	C35H	—	—	11		
	C35C	—	—	10		
	C35D	—	—	8		
	C35E	—	—	6		
	C35M	—	—	5		
	C35S	—	—	4.5		
	C35N	—	—	4		
	( $V_D = \text{Rated } V_{DRM} @ T_C = 125^\circ\text{C}$ )	All Devices	—	—	10	
Peak Reverse Blocking Current ( $V_R = \text{Rated } V_{RRM} @ T_C = +125^\circ\text{C}$ )	C35U,F,A,G	$I_{DRM(AV)}$ or $I_{RRM(AV)}$	—	—	6.5	mA
	C35B		—	—	6	
	C35H	—	—	5.5		
	C35C	—	—	5		
	C35D	—	—	4		
	C35E	—	—	3		
	C35M	—	—	2.5		
	C35S	—	—	2.25		
	C35N	—	—	2		
	( $V_R = \text{Rated } V_{RRM} @ T_C = 125^\circ\text{C}$ )	All Devices	—	—	10	
Peak On-State Voltage ( $I_{TM} = 50.3 \text{ A peak, Pulse Width} \leq 1 \text{ ms, Duty Cycle} \leq 2\%$ )		$V_{TM}$	—	—	2	Volts
Gate Trigger Current, Continuous dc ( $V_D = 12 \text{ Vdc, } R_L = 50 \Omega$ ) ( $V_D = 12 \text{ Vdc, } R_L = 50 \Omega, T_C = -65^\circ\text{C}$ )		$I_{GT}$	—	6	40	mA
			—	—	80	
Gate Trigger Voltage, Continuous dc ( $V_D = 12 \text{ Vdc, } R_L = 50 \Omega, T_C = -65^\circ\text{C to } +125^\circ\text{C}$ ) ( $V_D = \text{Rated } V_{DRM}, R_L = 1000 \Omega, T_C = 125^\circ\text{C}$ )		$V_{GT}$	—	—	3	Volts
			0.25	—	—	
Holding Current ( $V_D = 24 \text{ Vdc, Gate Supply} = 10 \text{ V, } 20 \Omega,$ $45 \mu\text{s minimum pulse width, } I_T = 0.5 \text{ A}$ )		$I_H$	—	—	100	mA
Critical Rate of Rise of Forward Blocking Voltage ( $V_D = \text{Rated } V_{DRM}, T_C = +125^\circ\text{C}$ )	C35U,F,M,S,N	dv/dt	10	—	—	$\text{V}/\mu\text{s}$
	C35A,G,B,H		20	—	—	
	C35C,D,E		25	—	—	