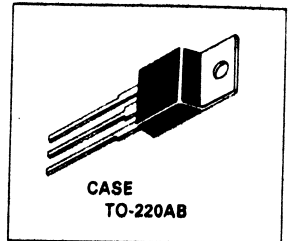


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**2N6394
 thru
 2N6399
 MCR220-5
 MCR220-7
 MCR220-9**



***MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Peak Repetitive Forward and Reverse Blocking Voltage ($T_J = -40$ to 125°C)	V_{RRM} or V_{DRM}	50 100 200 300 400 500 600 700 800	Volts
RMS On-State Current (All Conduction Angles)	$I_{T(RMS)}$	12	Amps
Peak Non-Repetitive Surge Current (1/2 cycle, Sine Wave, 60 Hz, $T_J = 125^\circ\text{C}$)	I_{TSM}	100	Amps
Circuit Fusing ($T_J = -40$ to $+125^\circ\text{C}$, $t = 1$ to 8.3 ms)	I^2t	40	A^2s
Forward Peak Power	PGM	20	Watts
Forward Average Gate Power	PG(AV)	0.5	Watt

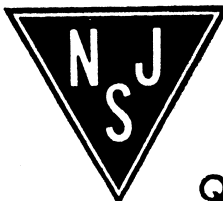
Rating	Symbol	Value	Unit
Forward Peak Gate Current	I_{GM}	2	Amps
Operating Junction Temperature Range	T_J	-40 to $+125$	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-40 to $+150$	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	2	$^\circ\text{C/W}$

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

Characteristic	Symbol	Min	Typ	Max	Unit
*Peak Forward or Reverse Blocking Current (Rated V_{DRM} or V_{RRM}) $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	I_{DRM} , I_{RRM}	—	—	10 2	μA mA
*Forward "On" Voltage ($I_{TM} = 24$ A Peak)	V_{TM}	—	1.7	2.2	Volts
*Gate Trigger Current (Continuous dc) ($V_D = 12$ Vdc, $R_L = 100$ Ohms)	I_{GT}	—	5	30	mA
*Gate Trigger Voltage (Continuous dc) ($V_D = 12$ Vdc, $R_L = 100$ Ohms) ($V_D = \text{Rated } V_{DRM}$, $R_L = 100$ Ohms, $T_J = 125^\circ\text{C}$)	V_{GT} V_{GD}	— 0.2	0.7 —	1.5 —	Volts
*Holding Current ($V_D = 12$ Vdc)	I_H	—	6	40	mA
Turn-On Time ($I_{TM} = 12$ A, $I_{GT} = 40$ mAdc, $V_D = \text{Rated } V_{DRM}$)	t_{gt}	—	1	2	μs
Turn-Off Time ($V_D = \text{Rated } V_{DRM}$) ($I_{TM} = 12$ A, $I_R = 12$ A) ($I_{TM} = 12$ A, $I_R = 12$ A, $T_J = 125^\circ\text{C}$)	t_q	—	15 35	—	μs
Critical Rate-of-Rise of Off-State Voltage Exponential ($V_D = \text{Rated } V_{DRM}$, $T_J = 125^\circ\text{C}$)	dv/dt	—	50	—	$\text{V}/\mu\text{s}$



Quality Semi-Conductors