

**MOTOROLA
SEMICONDUCTOR**
TECHNICAL DATA

**1N1199
thru
1N1206**

1N1204 is a
Motorola Preferred Device

MEDIUM-CURRENT SILICON RECTIFIERS

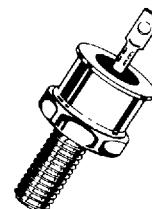
Silicon rectifiers for medium-current applications requiring

- High Current Surge —
240 Amperes @ $T_J = 190^\circ\text{C}$
- Peak Performance at Elevated Temperature —
12 Amperes @ $T_C = 150^\circ\text{C}$

**MEDIUM-CURRENT
SILICON RECTIFIERS**

50-600 VOLTS
12 AMPERES

DIFFUSED JUNCTION



CASE 245A-02
DO-203AA
METAL

3

***MAXIMUM RATINGS**

Characteristic	Symbol	1N 1199	1N 1200	1N 1202	1N 1204	1N 1206	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	Volts
Average Rectified Forward Current (Single phase resistive load 60 Hz $T_C = 150^\circ\text{C}$)	I_0	12				Amp	
Non Repetitive Peak Surge Current (Surge applied at rated load conditions half wave single phase 60 Hz)	I_{FSM}	240 (for 1 cycle)				Amp	
Operating Junction Temperature Range	T_J	-65 to +190				$^\circ\text{C}$	

***THERMAL CHARACTERISTICS**

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	2.0	$^\circ\text{C}/\text{W}$

MECHANICAL CHARACTERISTICS

CASE: Welded, hermetically sealed construction

FINISH: All external surfaces are corrosion-resistant and the terminal lead is readily solderable

POLARITY: Cathode to case (reverse polarity units are available and denoted by an "R" suffix, i.e., 1N1202R)

MOUNTING POSITION: Any

MOUNTING TORQUE: 15 in-lb max

**MAXIMUM TERMINAL TEMPERATURE FOR
SOLDERING PURPOSES:** 275°C for 10 seconds at 3 kg tension.

WEIGHT: 6 grams (approx.)

***ELECTRICAL CHARACTERISTICS**

Characteristic and Conditions	Symbol	Max	Unit
Maximum Instantaneous Forward Voltage ($I_F = 40 \text{ A}, T_C = 25^\circ\text{C}$)	V_F	1.8	Volts
Maximum Instantaneous Reverse Current (Rated voltage, $T_C = 150^\circ\text{C}$)	I_R	10	mA

*Indicates JEDEC registered data