

MOTOROLA
SEMICONDUCTOR
TECHNICAL DATA

1N1199A
thru
1N1206A

1N1204A is a
 Motorola Preferred Device

MEDIUM-CURRENT SILICON RECTIFIERS

Silicon rectifiers for medium-current applications requiring

- High Current Surge —
 240 Amperes @ $T_J = 200^\circ\text{C}$
- Peak Performance at Elevated Temperature —
 12 Amperes @ $T_C = 150^\circ\text{C}$

MEDIUM-CURRENT SILICON RECTIFIERS

50-600 VOLTS
 12 AMPERES

DIFFUSED JUNCTION

***MAXIMUM RATINGS**

Characteristic	Symbol	1N 1199A	1N 1200A	1N 1202A	1N 1204A	1N 1206A	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWWM} V_R	50	100	200	400	600	Volts
Non-Repetitive Peak Reverse Voltage (Halfwave, single phase 60 Hz peak)	V_{RSM}	100	200	350	600	800	Volts
Average Rectified Forward Current (Single phase, resistive load 60 Hz $T_C = 150^\circ\text{C}$)	I_O	← 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 and Storage Junction Temperature Range	T_J T_{stg}	← 65 to +200 →					$^\circ\text{C}$

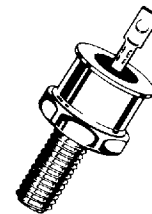
***THERMAL CHARACTERISTICS**

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

***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	1.35	Volts
Maximum Average Reverse Current at Rated Conditions	I_{RO}		mA
1N1199A		3.0	
1N1200A		2.5	
1N1202A		2.0	
1N1204A		1.5	
1N1206A		1.0	

*Indicates JEDEC registered data



CASE 245A-02
 DO-203AA
 METAL

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., 1N1202RA)

MOUNTING POSITION: Any
MOUNTING TORQUE: 15 in-lb max

MAXIMUM TERMINAL TEMPERATURE FOR SOLDERING PURPOSES: 275 $^\circ\text{C}$ for 10 seconds at 3 kg tension

WEIGHT: 6 grams (approx)

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