

1N1199 thru 1N1206



MOTOROLA

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

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_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 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	$^\circ\text{C}/\text{W}$

*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.

MECHANICAL CHARACTERISTICS

Case: Welded, hermetically sealed

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

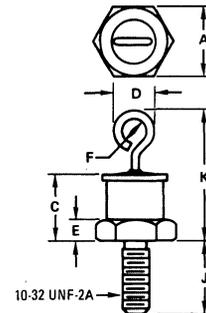
Polarity: Cathode to case (reverse polarity units are available and designed by an "R" suffix, i.e., 1N1202R)

Mounting Positions: Any

Stud Torque: 15 in/lbs max

Maximum Terminal Temperature for Soldering Purposes:
275 $^\circ\text{C}$ for 10 seconds at 3 kg tension.

Weight: 6 grams (approx)



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	10.77	11.10	0.424	0.437
C	—	10.29	—	0.405
D	—	6.35	—	0.250
E	1.91	4.45	0.075	0.175
F	1.52	—	0.060	—
J	10.72	11.51	0.422	0.453
K	—	20.32	—	0.800

CASE 245
DO-203AA
(DO-4)