

New Jersey Semi-Conductor Products, Inc.

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1N6095 1N6096 SD41

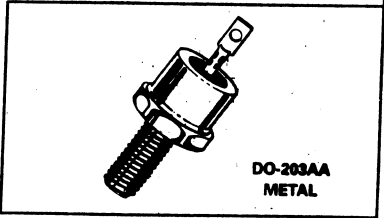
SWITCHMODE POWER RECTIFIERS

... using the Schottky Barrier principle with a platinum barrier metal.
These state-of-the-art devices have the following features:

- Guardring for Stress Protection
- Low Forward Voltage
- 150°C Operating Junction Temperature Capability
- Guaranteed Reverse Avalanche

**SCHOTTKY BARRIER
RECTIFIERS**

**25 and 30 AMPERES
30 to 45 VOLTS**



MAXIMUM RATINGS

Rating	Symbol	1N6095*	1N6096*	SD41	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	30	40	45 35 45	Volts
Average Rectified Forward Current (Rated V _R)	I _O	25 T _C = 70°C	25 T _C = 70°C	30 T _C = 105°C	Amps
Case Temperature (Rated V _R)	T _C	105	105	—	°C
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I _{FSM}	400	400	600	Amp
Peak Repetitive Reverse Surge Current (2.0 μs, 1.0 kHz) See Figure 10. (1)	I _{RRM}	2.0	2.0	2.0	Amps
Operating and Storage Junction Temperature Range	T _J , T _{stg}	-65 to +125	-65 to +125	-55 to +150°C	°C
Peak Operating Junction Temperature (Forward Current Applied)	T _{J(pk)}	150	150	150	°C
Voltage Rate of Change (Rated V _R)	dv/dt	—	—	700	V/μs

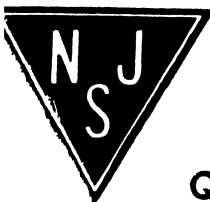
THERMAL CHARACTERISTICS

Characteristic	Symbol	1N6095*	1N6096*	SD41	Unit
Maximum Thermal Resistance, Junction to Case	R _{θJC}	← 2.0 →			°C/W

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	1N6095*	1N6096*	SD41	Unit
Maximum Instantaneous Forward Voltage (2) (I _F = 30 Amp, T _C = 125°C) (I _F = 78.5 Amp, T _C = 70°C)	V _F	— 0.86	— 0.86	0.55 —	Volts
Maximum Instantaneous Reverse Current (2) (Rated dc Voltage, T _C = 125°C)	I _R	250	250	125 @ V _R = 35 V	mA
Capacitance (100 kHz > f > 1.0 MHz)	C _t	6000 V _R = 1.0 V	6000 V _R = 1.0 V	2000 V _R = 5.0 V	pF

*Indicates JEDEC Registered Data.
(1) Not JEDEC requirement, but a Motorola product capability.
(2) Pulse Test: Pulse Width = 300 μs, Duty Cycle < 2.0%



Quality Semi-Conductors