

# SD41

## SCHOTTKY RECTIFIER



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### Switch mode Power Rectifier.

employing the Schottky Barrier principle in a large area metal-to-silicon power diode. State-of-the-art geometry features epitaxial construction with oxide passivation and metal overlap contact. Ideally suited for use as rectifiers in low-voltage, high-frequency inverters, free wheeling diodes, and polarity protection diodes.

- Extremely Low V<sub>f</sub>
- Low Stored Charge, Majority Carrier Conduction
- Low Power Loss/High Efficiency
- High Surge Capacity

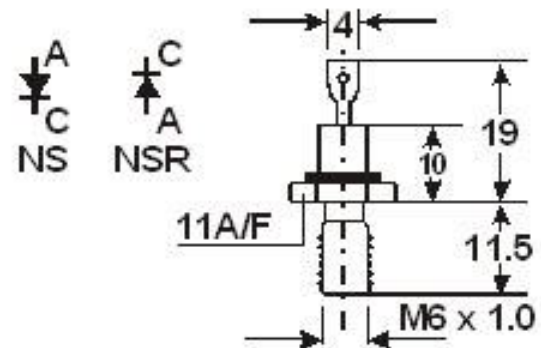
### Mechanical Characteristics :

- Case Welded steel, hermetically sealed
- Finish : All External Surfaces Corrosion Resistant and Terminal Lead is Readily Solderable

**Solder Heat :** The excellent heat transfer property of the heavy duty copper anode terminal which transmits heat away from the die requires that caution be used when attaching wires.

- Stud Torque: 15 lb-in max

**30 AMPERE  
45 VOLTS**



### MAXIMUM RATINGS

Ratings	Symbol	SD41	UNIT
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	45	Volts
Working Peak Reverse Voltage	V <sub>RWM</sub>		
PC Blocking Voltage	V <sub>R</sub>		
Nonrepetitive Peak Reverse Voltage	V <sub>PRM</sub>	54	Volts
Average Rectified Forward Current V <sub>RRM</sub> ≤ 0.2 V <sub>PRM</sub> , T <sub>C</sub> = 85°C	I <sub>O</sub>	30	Amps
Ambient Temperature Rated V <sub>RRM</sub> , P <sub>FOWM</sub> = 0, R <sub>θJC</sub> = 3.5°C/W	T <sub>A</sub>	90	°C
Nonrepetitive Peak Surge Current (surge applied at rated load conditions, halfwave, single phase, 60 Hz)	I <sub>FSM</sub>	600 for one cycle	Amps
Operating and Storage Junction Temperature Range (Reverse voltage applied)	T <sub>J</sub> , T <sub>stg</sub>	-65 TO +150	°C
Peak Operating Junction Temperature (Forward Current Applied)	T <sub>J(pk)</sub>	150	°C

### THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to case	R <sub>θJC</sub>	2.0	°C/W

### ELECTRICAL CHARACTERISTICS (T<sub>C</sub> = 25°C unless otherwise noted)

Maximum Instantaneous Forward Voltage (I <sub>F</sub> = 30Amps) (I <sub>F</sub> = 60Amps) (I <sub>F</sub> = 60Amps @ 150°C)	V <sub>F</sub>	0.58 0.75 0.70	Volts
Maximum Instantaneous Reverse Current @ 25°C @ 125°C		50 125	ma ma