

New Jersey Semi-Conductor Products, Inc.

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POWER SCHOTTKY RECTIFIERS 12A Pk, up to 45V

USD620
USD635
USD640
USD645

FEATURES

- Very Low Forward Voltage
- Reverse Transient Capability
- Economical Convenient Plastic Package
- Mechanically Rugged
- 45V Working Voltage @ Rated $T_{j,\text{max}}$

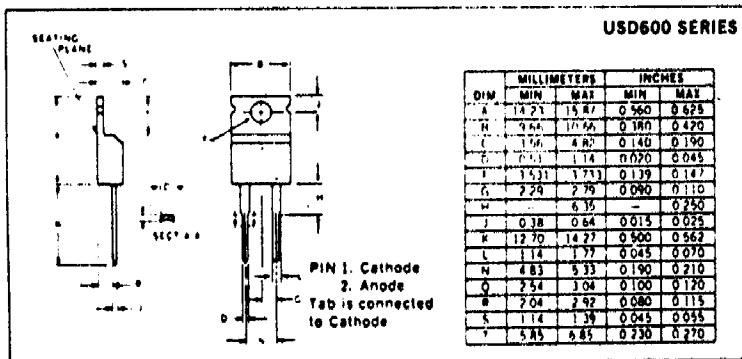
ABSOLUTE MAXIMUM RATINGS

	USD620	USD635	USD640	USD645
Working Peak Reverse Voltage, V_{RWM}	20V	35V	40V	45V
DC Blocking Voltage, V_R	20V	35V	40V	45V
Peak Repetitive Surge Voltage, $V_{RSM} @ I_{RM}$	24V	42V	48V	54V
Average Rectified Forward Current @ $T_c = 115^\circ\text{C}$, $I_{F,Avg}$			6A	
Peak Repetitive Forward Current (Rated V_R ,				12A
Square Wave, 20 KHz, 50% Duty Cycle, @ $T_c = 115^\circ\text{C}$, I_{RM}				150A
Non-repetitive Peak Surge Current (8.3ms), I_{RSM}				1A
Peak Reverse Transient Current, I_{RT}				150°C
Operating Junction Temperature, T_j				-55°C to +150°C
Storage Temperature Range, T_{Stg}				3.0°C/W
Thermal Resistance, Junction to Case, R_{JC}				

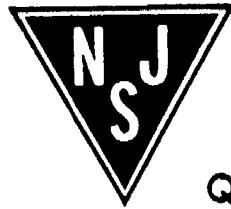
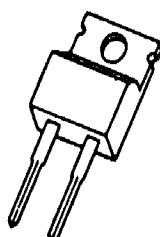
ELECTRICAL CHARACTERISTICS ($T_{CASE} = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	LIMIT	UNITS	CONDITIONS
Maximum Instantaneous Reverse Current	i_R	5	mA	$V_R = V_{RWM}$ Pulse Width = 400μs Duty Cycle = 1 percent
Maximum Instantaneous Reverse Current	i_R	50	mA	$V_R = V_{RWM}$ Pulse Width = 400μs Duty Cycle = 1 percent $T_c = 125^\circ\text{C}$
Maximum Instantaneous Forward Voltage	V_F	0.55	V	$i_F = 6\text{A}$
		0.65	V	$i_F = 12\text{A}$
Capacitance	C_F	0.48	V	$i_F = 6\text{A}$
		0.60	V	$i_F = 12\text{A}$ } $T_c = 125^\circ\text{C}$
Voltage Rate of Change	dv/dt	1000	pF	$V_R = 5\text{V}$
		1000	V/μs	$V_R = V_{RWM}$

MECHANICAL SPECIFICATIONS



SIMILAR TO TO-220



Quality Semi-Conductors