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## ULTRAFAST POWER RECTIFIER

Qualified per MIL-PRF-19500/647

### DEVICES

**1N6778      1N6779**

### LEVELS

**JAN  
 JANTX  
 JANTXV**

### ABSOLUTE MAXIMUM RATINGS ( $T_C = +25^\circ\text{C}$ unless otherwise noted)

Parameters / Test Conditions	Symbol	Value	Unit
Peak Repetitive Reverse Voltage 1N6778 1N6779	$V_{RWM}$	400 600	Vdc
Average Forward Current <sup>(1)</sup> $T_C = +100^\circ\text{C}$	$I_F$	15	A <sub>dc</sub>
Peak Surge Forward Current	$I_{FSM}$	140	A (pk)
Thermal Resistance Junction to Case	$R_{\theta JC}$	1.8	$^\circ\text{C/W}$

#### Note:

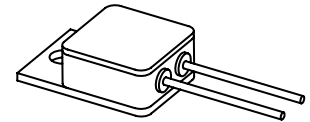
(1) Derate at 300mA/ $^\circ\text{C}$  above  $T_C = +100^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_A = +25^\circ\text{C}$ , unless otherwise noted)

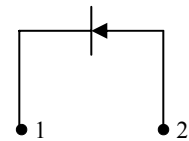
Parameters / Test Conditions	Symbol	Min.	Max.	Unit
Breakdown Voltage $I_R = 10\mu\text{A}$ <sup>(2)</sup> 1N6778 1N6779	$V_{BR}$	400 600		Vdc
Forward Voltage $I_F = 8\text{A}_{dc}$ <sup>(2)</sup> $I_F = 15\text{A}_{dc}$ <sup>(2)</sup>	$V_{F1}$ $V_{F2}$		1.40 1.60	Vdc
Reverse Leakage Current $V_R = 320\text{V}$ <sup>(2)</sup> $V_R = 480\text{V}$ <sup>(2)</sup> 1N6778 1N6779	$I_{R1}$		10	$\mu\text{A}_{dc}$
Reverse Leakage Current $T_C = +100^\circ\text{C}$ $V_R = 320\text{V}$ <sup>(2)</sup> $V_R = 480\text{V}$ <sup>(2)</sup> 1N6778 1N6779	$I_{R2}$		1.0	mA
Reverse Recovery Time $I_F = 0.5$ , $I_{RM} = 1.0$ , $I_{RR} = 0.25$	$t_{rr}$		60	ns
Junction Capacitance $V_R = 5\text{V}_{dc}$ , $f = 1.0\text{MHz}$	$C_J$		300	pF

#### Notes:

(2) Pulse test, 300 $\mu\text{s}$ , Duty Cycle  $\leq 2\%$



**TO-257  
 (2 Pin Version)**



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