

ULTRAFAST SILICON POWER RECTIFIER

Qualified per MIL-PRF-19500/ 646

Devices

1N6774 1N6775 1N6776 1N6777

Qualified Level

JAN
JANTX
JANTXV

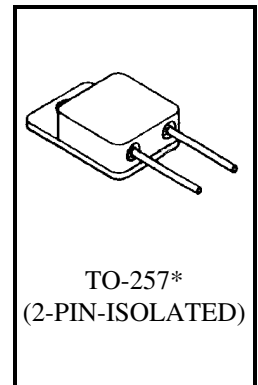
MAXIMUM RATINGS

Ratings	Symbol	1N6774	1N6775	1N6776	1N6777	Unit
Working Peak Reverse Voltage	V_{RWM}	50	100	150	200	Vdc
Forward Current $T_C = +100^{\circ}\text{C}^{(1)}$	I_F	15				A dc
Forward Current Surge Peak $T_P = 8.3^{\circ}\text{C}$	I_{FSM}	180				A pk
Operating & Storage Junction Temperature	T_{op}, T_{stg}	-65 to +150				$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max.	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	2.0	$^{\circ}\text{C/W}$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	40	$^{\circ}\text{C/W}$

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



*See appendix A for package

ELECTRICAL CHARACTERISTICS ($T_C = +25^{\circ}\text{C}$ Unless Otherwise Noted)

outline

Characteristics	Symbol	Min.	Max.	Unit
Forward Voltage $I_F = 8.0$ A dc, pulsed $I_F = 15$ A dc, pulsed	V_F		1.00 1.15	Vdc
Reverse Current Leakage $V_R = 0.8$ of V_{RWM}	I_R		10	$\mu\text{A dc}$
Thermal Impedance $I_M = 15$ mA dc; $I_H = 9.9$ A dc; $t_H = 200$ ms; $t_{MD} = 35$ μs ; $V_H = 1$ Vdc	$Z_{\theta JX}$		1.8	$^{\circ}\text{C/W}$
Breakdown Voltage $I_R = 10$ $\mu\text{A dc}$	V_{BR}		50 100 150 200	Vdc
Junction Capacitance $V_R = 5.0$ Vdc, $f = 1.0$ MHz	C_J		300	pF
Reverse Recovery Time $I_F = 1.0$ A dc; $di/dt = 50$ A/ μs	t_{rr}		35	ns