

DUAL ULTRAFAST POWER RECTIFIER

Qualified per MIL-PRF-19500/644

DEVICES

1N6768	1N6769	1N6770	1N6771
1N6768R	1N6769R	1N6770R	1N6771R

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 $I_D = 5\mu\text{A}_{\text{dc}}$	V_{RWM}	50	Vdc	
1N6768, R		100		
1N6769, R		150		
1N6770, R 1N6771, R		200		
Average Forward Current ⁽¹⁾	$T_C = +100^\circ\text{C}$	I_F	8	A _{dc}
Peak Surge Forward Current		I_{FSM}	60	A(pk)
Thermal Resistance - Junction to Case		$R_{\theta\text{jc}}$	3.8	$^\circ\text{C}/\text{W}$

Note:

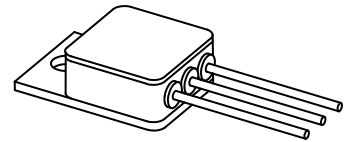
(1) Derate linearly @ 160mA/ $^\circ\text{C}$ above $T_C = 100^\circ\text{C}$

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

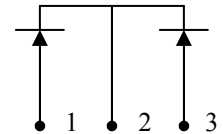
Parameters / Test Conditions	Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS				
Breakdown Voltage ⁽²⁾	V_{BR}	50		Vdc
1N6768, R		100		
1N6769, R		150		
1N6770, R 1N6771, R		200		
Forward Voltage $I_F = 4\text{A}_{\text{dc}}$ ⁽²⁾ $I_F = 8\text{A}_{\text{dc}}$ ⁽²⁾	V_{F1} V_{F2}		0.97 1.06	Vdc
Reverse Leakage Current $V_R = 40\text{V}$ ⁽²⁾ $V_R = 80\text{V}$ ⁽²⁾ $V_R = 120\text{V}$ ⁽²⁾ $V_R = 160\text{V}$ ⁽²⁾	I_{R1}	1N6768, R	10	μA_{dc}
1N6769, R				
1N6770, R				
1N6771, R				
Reverse Leakage Current $T_C = +100^\circ\text{C}$ $V_R = 40\text{V}$ ⁽²⁾ $V_R = 80\text{V}$ ⁽²⁾ $V_R = 120\text{V}$ ⁽²⁾ $V_R = 160\text{V}$ ⁽²⁾	I_{R2}	1N6768, R	500	μA_{dc}
1N6769, R				
1N6770, R				
1N6771, R				
Reverse Recovery Time $I_F = 1\text{A}$, $di/dt = 50\text{A}/\mu\text{s}$	t_{rr}		35	nS
Junction Capacitance $V_R = 5\text{V}_{\text{dc}}$, $f = 1.0\text{MHz}$	C_J		150	pF

Note:

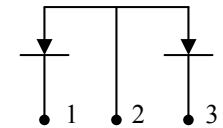
(2) Pulse Test; 300 μs , duty cycle $\leq 2\%$



TO-257AA

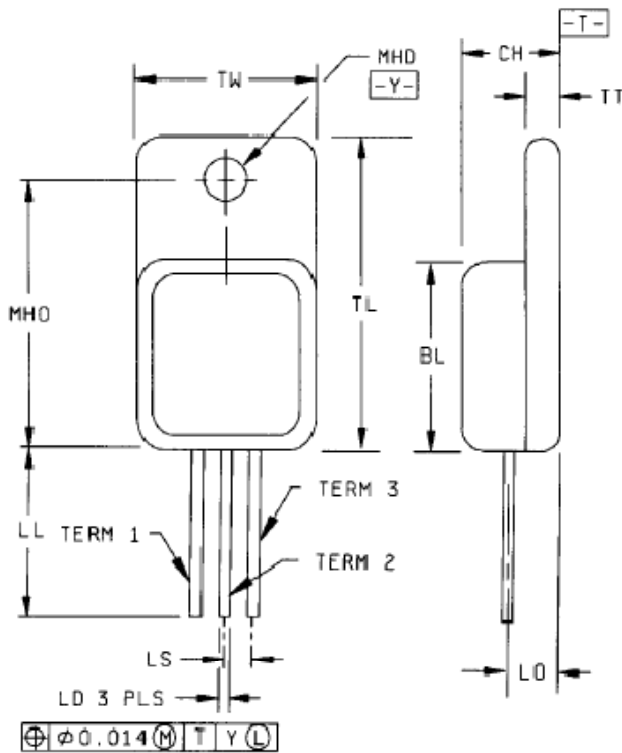


COMMON CATHODE



COMMON ANODE
R = Reverse

PACKAGE DIMENSIONS



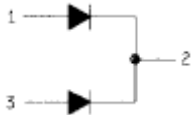
Symbol	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
BL	.410	.430	10.4	10.9
CH	.190	.200	4.82	5.10
LD	.025	.035	0.64	0.89
LL	.500	.750	12.70	19.05
LO	.120 TYP		3.05 TYP	
LS	.100 BSC		2.54 BSC	
MHD	.140	.150	3.55	3.80
MHO	.527	.537	13.4	13.6
TL	.645	.665	16.4	16.9
TT	.035	.045	0.90	1.15
TW	.410	.420	10.4	10.7

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. All terminals are isolated from case.

SCHEMATIC

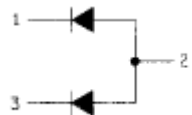
1N6768, 1N6769, 1N6770, 1N6771



Terminal **Description**

- | | |
|---|---------|
| 1 | Anode 1 |
| 2 | Cathode |
| 3 | Anode 2 |

1N6768R, 1N6769R, 1N6770R, 1N6771R



Terminal **Description**

- | | |
|---|-----------|
| 1 | Cathode 1 |
| 2 | Anode |
| 3 | Cathode 2 |

FIGURE 1. Physical dimensions and configuration TO-257AA).