SiPower

Power Semiconductor Technology

TUF4001F～TUF4007F

General Rectifier Diodes

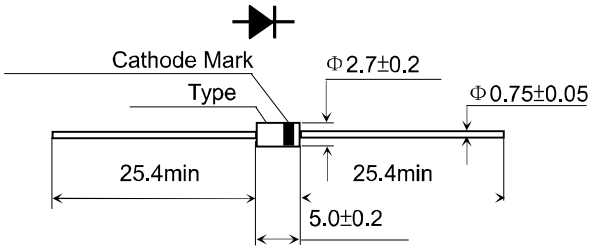
■ Features

- $I_{F(AV)}$ 1.0A
- V_{RRM} 50V~1000V
- High reliability
- Trr①≤50ns, 75ns
- Halogen Free product

■ Applications

■ Outline Dimensions and Mark

Unit：mm



■ Limiting Values（Absolute Maximum Rating）

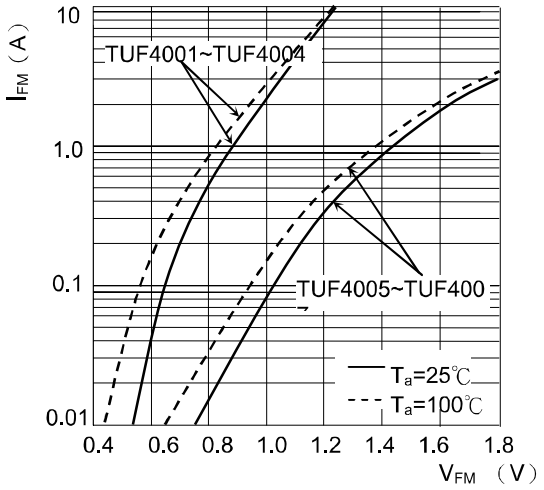
Item	Symbol	Unit	TUF						
			4001F	4002F	4003F	4004F	4005F	4006F	4007F
Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Peak Working Reverse Voltage	V_{RWM}	V	50	100	200	400	600	800	1000
Non-Repetitive Peak Reverse Voltage	V_{RSM}	V	75	150	220	440	660	880	1100
Average Forward Current	$I_{F(AV)}$	A	1.0 (50Hz Half-sine wave, Resistance load, T_{break}=50℃)						
Surge(Non-repetitive)Forward Current	I_{FSM}	A	30 (50Hz Half-sine wave, 1 cycle, T_a=25℃)						
Junction and Storage Temperature	T_j、T_{stg}	℃	-40 ~ +150						
Operating Ambient Temperature	T_a	℃	-40 ~ +150						

■ Electrical Characteristics（T_a=25℃ Unless otherwise specified）

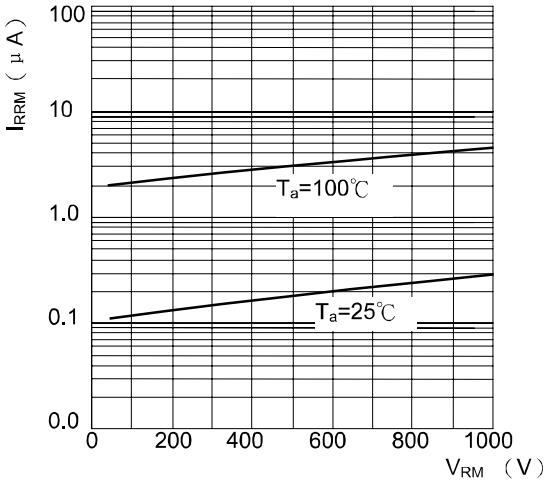
Item	Symbol	Unit	Test Condition		Max						
					TUF						
					4001F	4002F	4003F	4004F	4005F	4006F	4007F
Peak Forward Voltage	V_{FM}	V	I_{FM}=1.0A		1.0				1.7		
Peak Reverse Current	I_{RRM1}	μA	V_{RM}=V_{RRM}	T_a=25℃	10						
	I_{RRM2}			T_a=100℃	150						
Reverse Recovery Time	t_{rr}①	ns	I_F=0.5A I_{RM}=1A I_{RR}=0.25A		50				75		
Thermal Resistance (Typical)	$R_{θJ-A}$	℃/W	Between junction and ambient		55						
	$R_{θJ-L}$		Between junction and lead		25						

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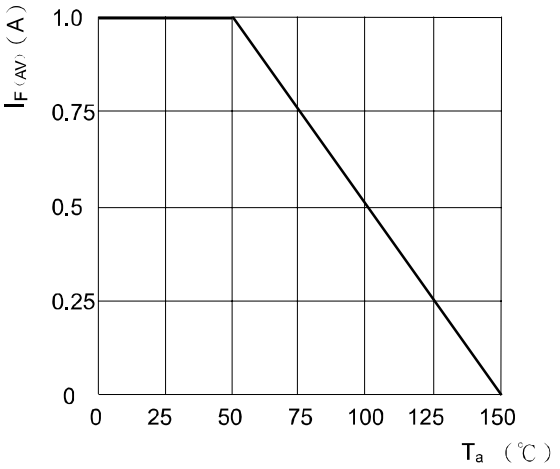
■ Characteristics(Typical)



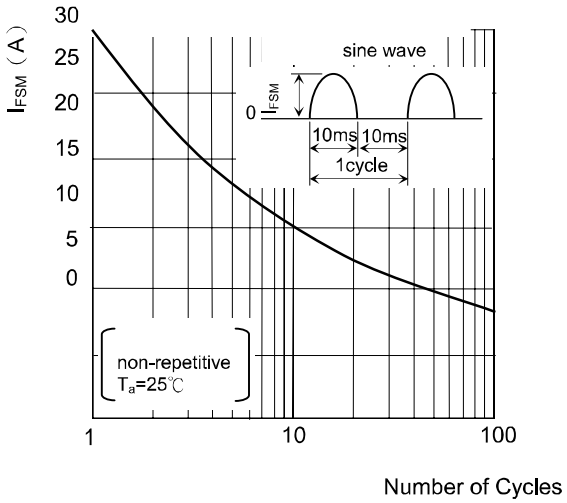
Forward Characteristics



Reverse Characteristics



$I_{F(AV)}$—T_a Derating



Surge Forward Current Capability

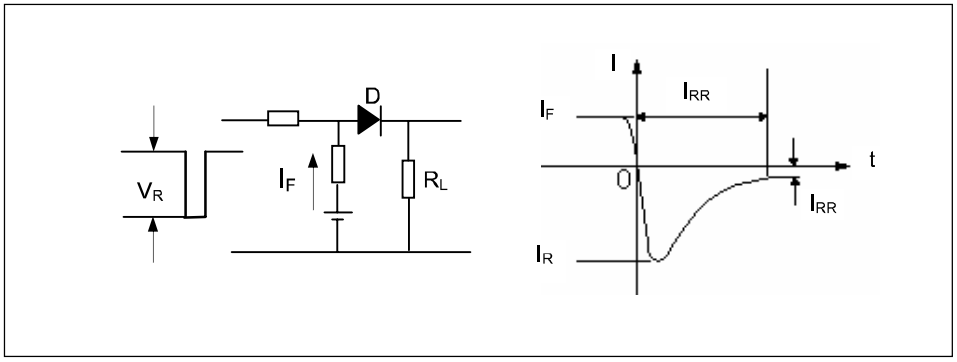


Diagram of Circuit and Testing Wave form of Reverse Recovery Time t_{rr}

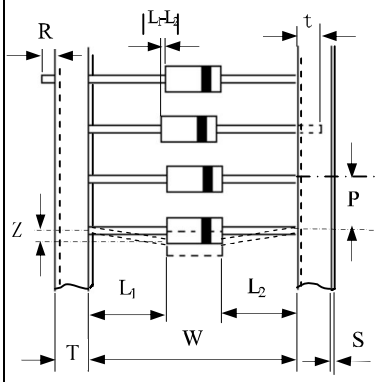
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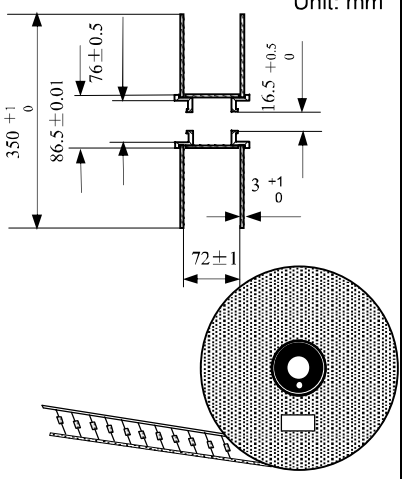
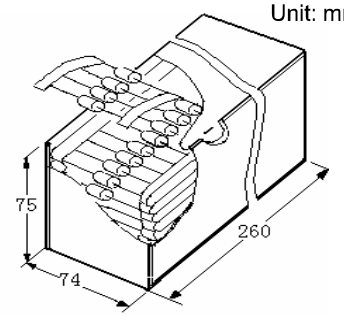
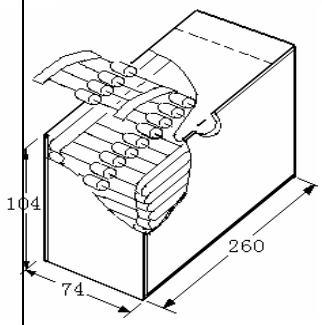
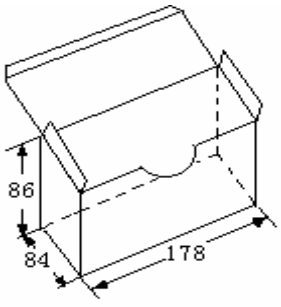
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TUF4001F~TUF4007F

General Rectifier Diodes

Packing Illustration

<table>
<tr><th rowspan="2">Type</th><th rowspan="2">Mode</th><th colspan="3">Quantity</th><th rowspan="2">Method</th></tr>
<tr><th>Fig.①
Fig.②</th><th>Fig.③</th><th>Fig.④</th></tr>
<tr><td rowspan="3">Tapping</td><td rowspan="3">

<table>
<tr><th>Symbol</th><th>mm
Dimension</th></tr>
<tr><td>W</td><td>52±1</td></tr>
<tr><td>T</td><td>6±1</td></tr>
<tr><td>R</td><td>≤0.8</td></tr>
<tr><td>P</td><td>5/10±0.5</td></tr>
<tr><td>$|L_1-L_2|$</td><td>≤1</td></tr>
<tr><td>Z</td><td>≤1.2</td></tr>
<tr><td>t</td><td>≥3.2</td></tr>
<tr><td>S</td><td>≤0.8</td></tr>
</table></td><td>4000
kpcs/
reel</td><td>—</td><td>—</td><td>Unit: mm

</td></tr>
<tr><td>2000
kpcs/
box</td><td>1000
kpcs/
box</td><td>—</td><td>Unit: mm

</td></tr>
<tr><td>2000
kpcs/
box</td><td>—</td><td>—</td><td>Unit: mm

</td></tr>
<tr><td>Bulk</td><td></td><td>2000
kpcs/
box</td><td>2000
kpcs/
box</td><td>7500
kpcs/
box</td><td>Unit: mm

</td></tr>
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