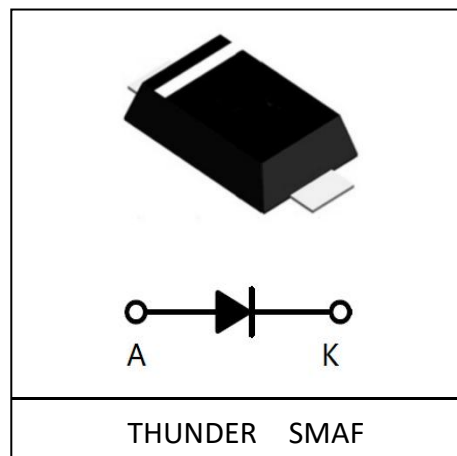


Planar Epitaxial Type FRED Hyperfast Soft Recovery Diode, 1A

Features:

- Hyperfast Recovery
- 175°C operating junction temperature
- High frequency operation
- Low power loss, less RFI and EMI
- Low I_R value
- High surge capacity

Product Summary	
V_R	600 V
$I_F(AV)$	1A
t_{rr}	13ns (typ)



Description/Applications

These diodes are optimized to less losses and EMI/RFI in high frequency power conditioning system. The soft recovery behavior of the diodes offers the need as snubber in most applications. These devices are ideally suited for SMT welding power converters and other applications where the switching losses are not significant portion of the total losses.

Absolute Maximum Ratings

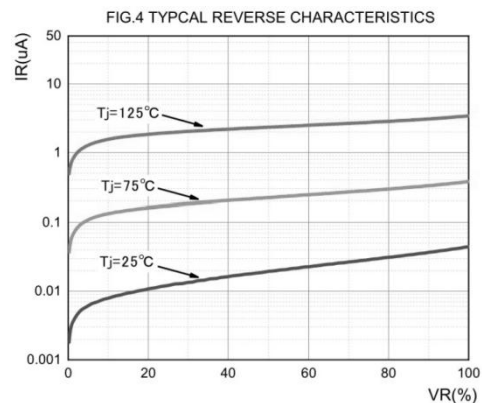
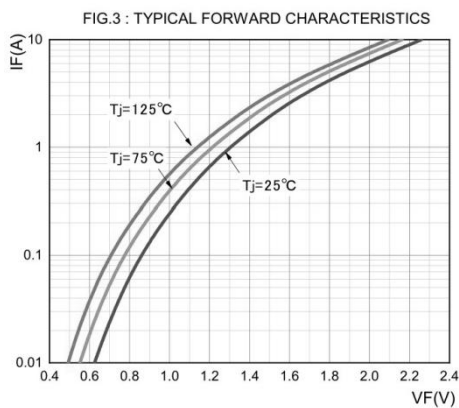
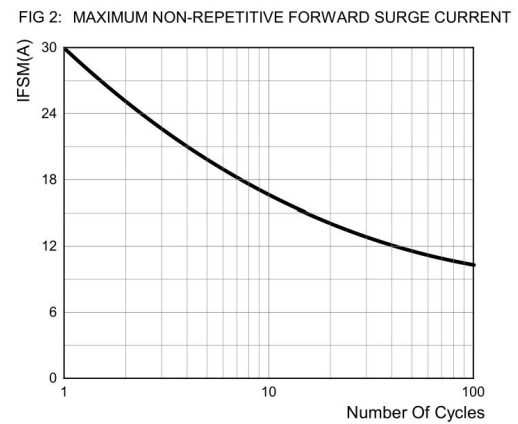
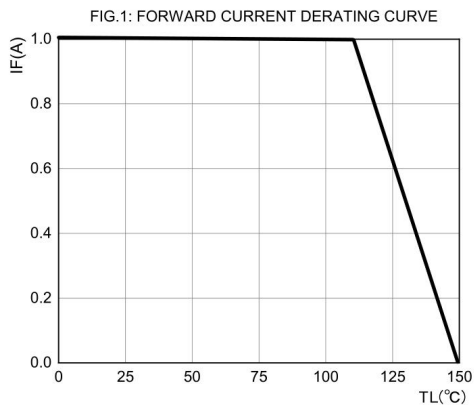
Parameter	Symbol	Test Conditions	Values	Unit
Repetitive peak reverse voltage	V_{RRM}		600	V
Continuous forward current	$I_F(AV)$	$T_c = 110^\circ\text{C}$	1	A
Single pulse forward current	I_{FSM}	$T_c = 25^\circ\text{C}$	55	
Maximum repetitive forward current	I_{FRM}	Square wave, 20kHz	4	
Operating junction	T_j		175	$^\circ\text{C}$
Storage temperatures	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical characteristics (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	V_{BR} , V_R	$I_R=100\mu A$	600			V
Forward voltage	V_F	$I_F=1A, T_j=25^\circ C$		1.65		
		$I_F=1A, T_j=100^\circ C$		1.55		
Reverse leakage current(Per Diode)	I_R	$V_R=V_{RRM}, T_j=25^\circ C$			5	μA
		$T_j=100^\circ C, V_R=600V$			100	
Reverse recovery time(Per Diode)	t_{rr}	$I_F=0.5A, I_R=1A, I_{RR}=0.25A$		16		ns
		$I_F=1A, V_R=30V, di/dt=200A/us$		13		

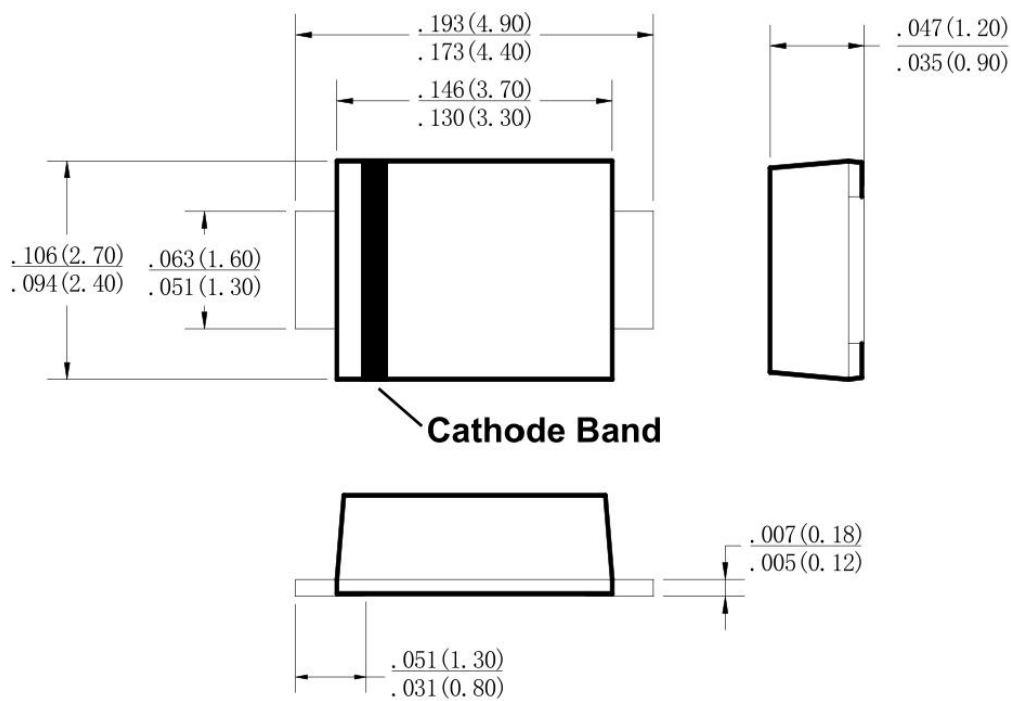
Thermal characteristics

Paramter	Symbol	Typ.	Unit
$R_{\theta JL}$	Typical Thermal Resistance	27	$^\circ C/W$

Electrical performance (typical)


Package Information

SMAF PACKAGE



Dimensions in inches and (millimeters)

Notice

Thunder Microelectronics Incorporated Limited reserves the right to make changes without further notice to any products or specifications herein. When use the product, be sure to obtain the latest specification.

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