

Fast Recovery Rectifier

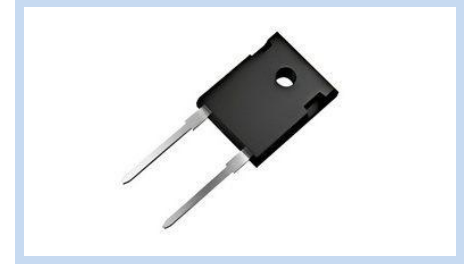
600V 30A TO-247-2

SFP3060AT2472

MERITEK

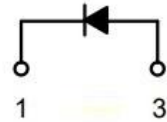
FEATURE

- High Surge Current Capability
- Fast Recovery with Optimized Q_{RR}
- Optimized for HF Applications with Minimized Switching Losses
- Soft Recovery Characteristic for Better EMI



APPLICATIONS

- Switching-Mode Power Supply (SMPS)
- Power Factor Correction (PFC) Circuits
- Power Inverters and converters
- Freewheeling / flyback diodes



MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Maximum Peak Reverse Voltage	V_{RRM}	600	V
Average Forward Rectified Current, Rated V_R , 20KHz Square Wave, 50% Duty Cycle	$I_{F(AV)}$	30	A
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	300	A
Thermal Resistance from Junction to Case (per leg)	R_{BJC}	0.5	$^{\circ}C/W$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-40~+175	$^{\circ}C$

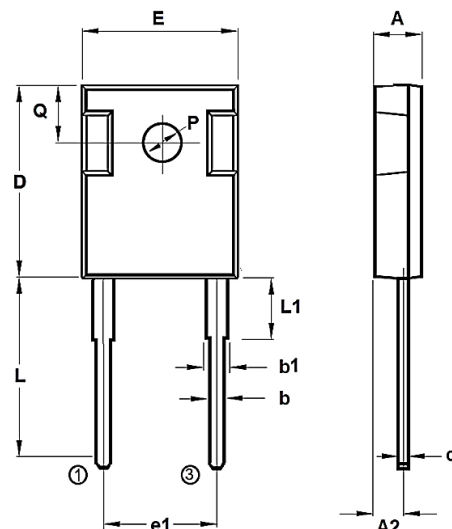
ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Symbol	Min	Typ.	Max	Unit
Reverse Breakdown Voltage	$I_R=100\mu A, T_J=25^{\circ}C$	V_{BR}	600	-	-	V
Instantaneous Forward Voltage	$I_F=30A, T_J=25^{\circ}C$	V_F	-	1.30	1.55	V
	$I_F=30A, T_J=125^{\circ}C$		-	-	1.45	V
Reverse Leakage Current	$V_R=600V, T_J=25^{\circ}C$	I_R	-	-	10	μA
	$V_R=600V, T_J=125^{\circ}C$		-	-	1000	μA
Reverse Recovery Time	$I_F=0.5A, I_R=1.0A, I_{rr}=0.25A, T_J=25^{\circ}C$	T_{RR}	-	-	50	nS
Capacitance	$V_R=0V, f=1MHz, T_J=25^{\circ}C$	C_J	-	430	-	pF

DIMENSIONS

Item	Min (mm)	Max (mm)
A	4.70	5.30
A2	2.50	2.70
b	0.90	1.50
b1	1.70	2.30
c	0.50	0.70
D	20.15	20.75
e1	10.90 REF	
E	15.30	15.90
L	20.05	21.05
L1	4.10	4.90
P	3.50 REF	
Q	6.00 REF	

Note: Pin Layout: 1:Cathode(K), 3:Anode(A)



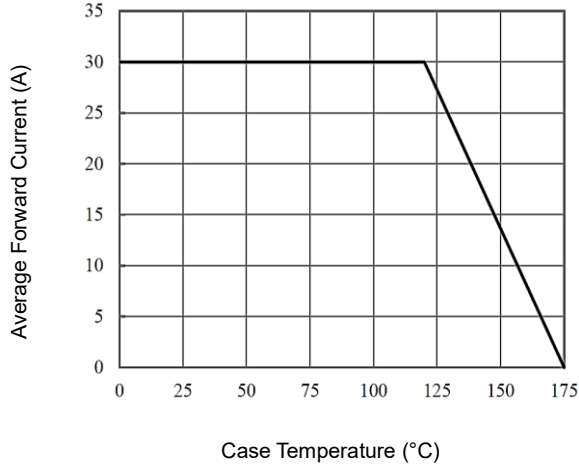
Fast Recovery Rectifier 600V 30A TO-247-2

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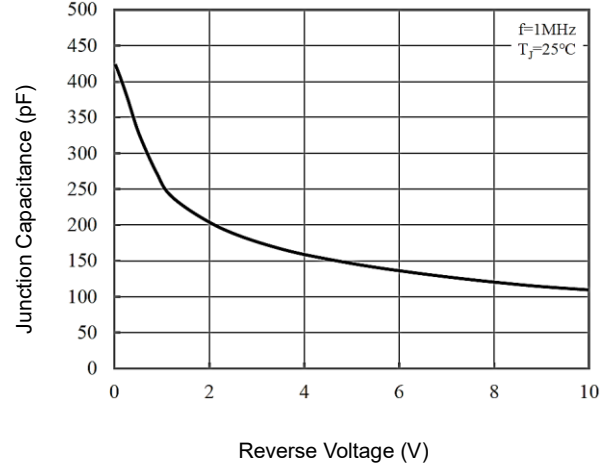
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CHARACTERISTICS CURVES

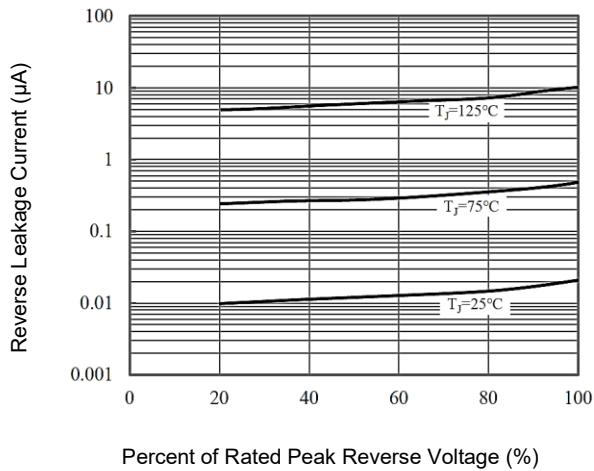
Forward Current Derating Curve



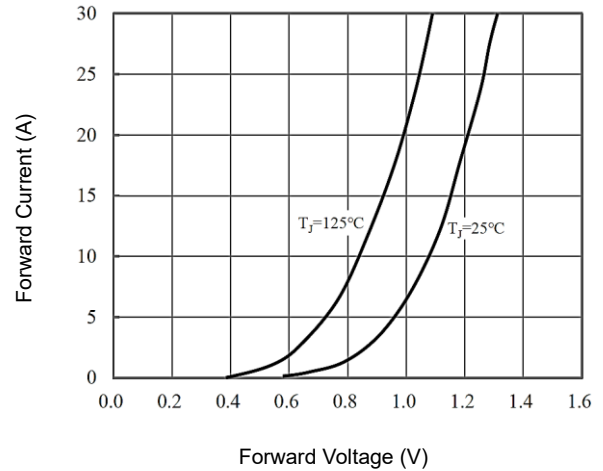
Typical Junction Capacitance



Typical Reverse Characteristics



Typical Forward Characteristics



ORDERING INFORMATION

Part Number	Qty / tube	Qty / Inner Box	Qty / Outer Box
SFP3060AT2472	30pcs	360pcs	1800pcs