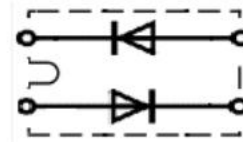


Ultrafast High Voltage Diode

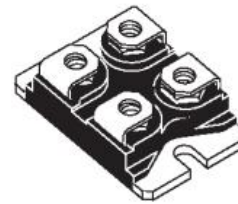
FEATURES

- High surge current capability
- Wide current range
- High voltage ratings up to 1200V
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Be suitable in motor control circuitries, or in the primary of SMPS as snubber, clamping or demagnetizing diodes. They are also suitable for secondary of SMPS as high voltage rectifier diodes.



ABSOLUTE MAXIMUM RATINGS

SYMBOL	PARAMETER	CONDITIONS		VALUE	UNIT
V_{RRM}	Repetitive Peak Reverse Voltage			1200	V
$I_{F(AV)}$	Average Forward Current			2*45	A
I_{FRMS}	RMS Forward Current	$T_{VJ} = T_{VJM}$		70	A
I_{FSM}	Surge Forward Current	$t=10ms(50Hz),sine$	$T_{VJ}=45^{\circ}C$	200	A
		$t=8.3ms(60Hz),sine$		210	
		$t=10ms(50Hz),sine$	$T_{VJ}=150^{\circ}C$	185	
		$t=8.3ms(60Hz),sine$		195	
I^2t	I^2t for fusing	$t=10ms(50Hz),sine$	$T_{VJ}=45^{\circ}C$	200	KA ₂ S
		$t=8.3ms(60Hz),sine$		180	
		$t=10ms(50Hz),sine$	$T_{VJ}=150^{\circ}C$	170	
		$t=8.3ms(60Hz),sine$		160	
T_J	Junction Temperature			-40~150	°C
T_{stg}	Storage Temperature Range			-40~150	°C

THERMAL CHARACTERISTICS

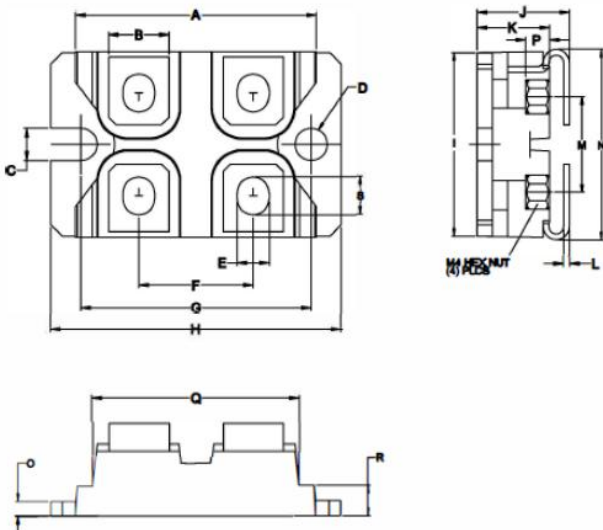
SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.25	$^{\circ}C/W$

ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
I_R	Reverse Recovery current	$V_R = V_{RRM}$	0.75	mA
V_{FM}	Forward Voltage drop	$I_F = 30A, T_J = 150^{\circ}C$	2.2	V
t_{rr}	Reverse Recovery time	$I_F = 1A; -di/dt = 100A/\mu s; V_R = 30V; T_{VJ} = 25^{\circ}C$	60	ns

PACKAGE OUTLINE

Dimensions in mm (1mm = 0.0394")



SOT-227 Package Outline

DIM	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	31.40	31.60	1.236	1.244
B	7.70	8.10	0.303	0.319
C	4.20	4.40	0.165	0.173
D	4.20	4.40	0.165	0.173
E	4.10	4.30	0.161	0.169
F	14.90	15.10	0.587	0.594
G	30.10	30.20	1.185	1.189
H	38.00	38.30	1.496	1.507
I	23.80	24.20	0.937	0.953
J	12.20	12.70	0.480	0.500
K	9.40	9.60	0.370	0.378
L	0.75	0.85	0.030	0.033
M	12.40	12.60	0.488	0.496
N	24.50	25.40	0.964	1.000
O	1.90	2.10	0.075	0.083
P	3.10	3.20	0.122	0.126
Q	26.60	27.00	1.063	1.079
R	3.80	4.20	0.150	0.165
S	5.10	5.40	0.205	0.213

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