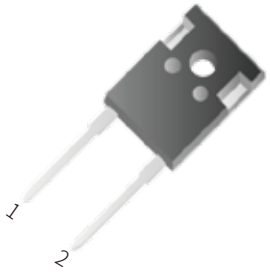
FEATURES

- Low forward voltage
- High forward surge current capability



TO-247AC

Schematic Symbol

APPLICATION

For use in ultrafast switching rectification of power suppliers, inverters, converters, and freewheeling diodes for consumer and telecommunication.

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	ER9060P	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Maximum RMS Voltage	V_{RMS}	420	V
Maximum DC Blocking Voltage	V_{DC}	600	V
Maximum Average Forward Rectified Current At T_C=120°C	$I_{(AV)}$	90.0	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load	I_{FSM}	700	A
Typical junction capacitance (Note1)	C_J	330	pF
Typical Thermal Resistance	$R_{\theta JA}$	35	°C/W
Typical Thermal Resistance	$R_{\theta JC}$	0.6	°C/W
Operating Junction Temperature Range	T_J	-55 ~ +175	°C
Storage Temperature Range	T_{STG}	-55 ~ +175	°C

Note:
1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Minimum reverse breakdown voltage	V_R	I_R= 0.05mA	600	700		V
Maximum instantaneous forward voltage	V_F	I_F=90A		1.42	1.7	V
Maximum DC reverse current at rated DC blocking voltage	I_R	T_A=25°C		0.1	10	μA
		T_A=25°C		90	500	μA
Maxinum reverse recovery time	T_{rr}	I_F=0.5A I_R=1.0A I_{rr}=0.25A		70	100	ns

CHARACTERISTIC CURVES

Fig.1 -Derating Curve Output Rectified Current

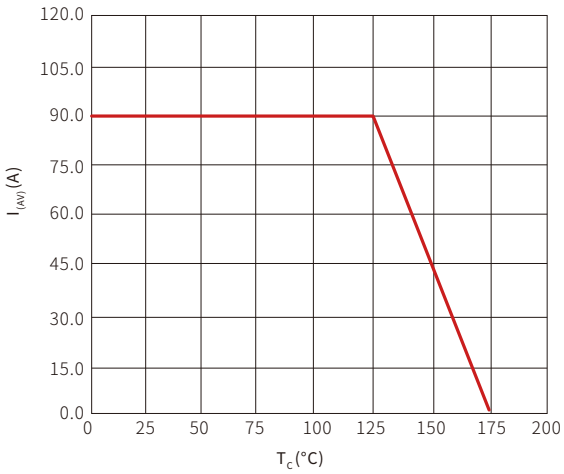


Fig.2 -Maximum Non-repetitive Peak Forward Surge Current Perleg

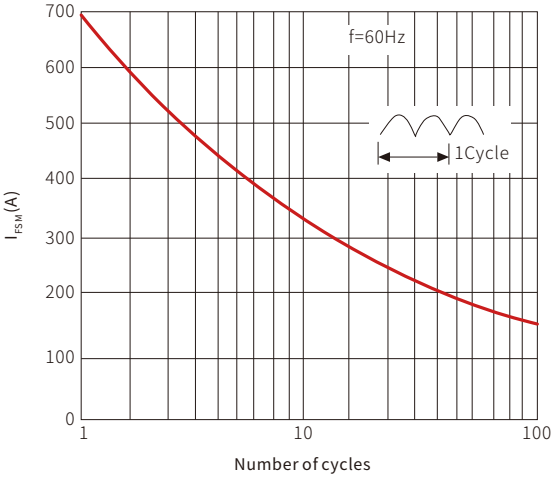


Fig.3 -Typical Forward Voltage Characteristics

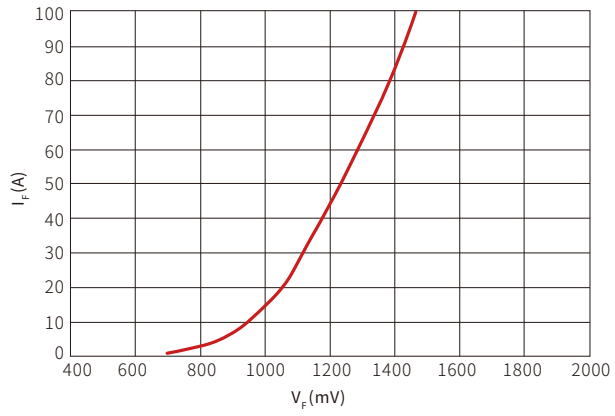
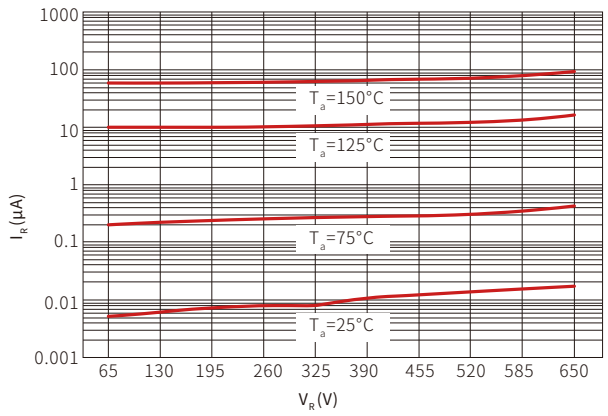
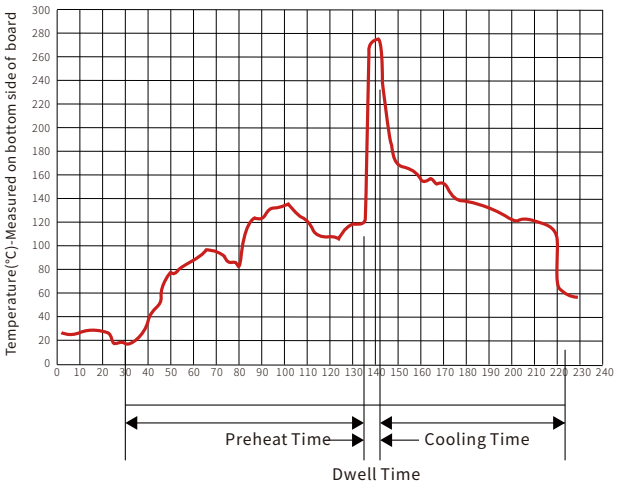


Fig.4 -Typical Reverse Leakage Characteristics

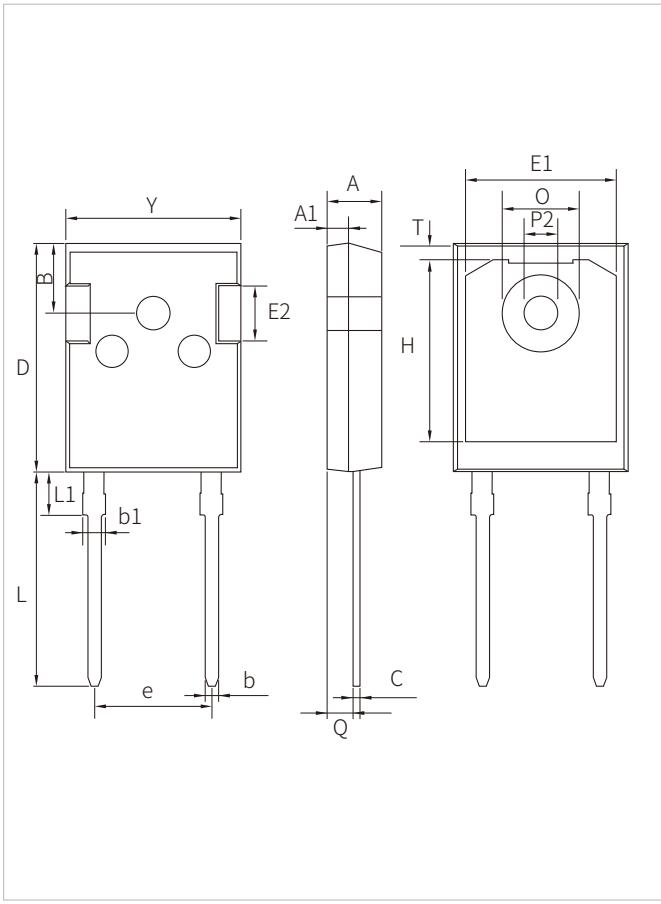


WAVE SOLDERING



Wave Parameter		Lead–free assembly
Pre Heat	Temperature Min	100°C
	Temperature Max	150°C
	Time(min to max)	60 – 180 secs
Solder pot Temperature		280°C Max
Solder Dwell Time		2-5 seconds

TO-247AC PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.70	5.30	0.185	0.209
A1	1.70	2.30	0.067	0.091
C	0.45	0.75	0.018	0.030
Q	2.20	2.60	0.087	0.102
O	7.10	7.40	0.280	0.291
P2	3.45	3.75	0.136	0.148
L	19.00	21.00	0.748	0.827
L1	4.20	4.50	0.165	0.177
b	1.00	1.40	0.039	0.055
b1	1.80	2.25	0.071	0.089
e	10.65	10.95	0.419	0.431
D	20.65	21.35	0.813	0.841
Y	15.60	16.00	0.614	0.630
E2	4.60	5.40	0.181	0.213
T	1.35REF		0.053REF	
H	16.5REF		0.650REF	
E1	14.00REF		0.551REF	
B	6.30REF		0.248REF	

ORDERING INFORMATION

Part Number	Component Package	Marking	QTY/Tube	QTY/Box	QTY/Carton
ER9060P	TO-247AC	ER9060P	30PCS	450PCS	2250PCS

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