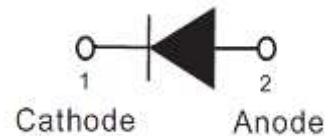


SURFACE MOUNT SUPER FAST RECTIFIER

DESCRIPTION:



The ALPER2J is Surface Mount Super Fast Rectifier with High forward surge current capability in Low profile package, low reverse leakage and it has high efficiency operation.



FEATURES:

- Super-fast switching for high efficiency
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering guaranteed: 250°C / 10 seconds at terminals
- Polarity: Color band denotes cathode
- Weight: 0.058 grams
- RoHS Compliant
- REACH Compliant

APPLICATIONS:

- Switching mode power supply (SMPS)
- Adapters
- Lighting application
- Converter

TYPICAL DEVICE CHARACTERISTICS

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	ALPER2J	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 $T_A=55^\circ\text{C}$	$I_{(AV)}$	2.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50.0	A
Maximum instantaneous forward voltage at 2.0A	V_F	1.7	V
Maximum DC reverse current $T_A=25^\circ\text{C}$	I_R	5.0	μA
at rated DC blocking voltage $T_A=100^\circ\text{C}$		200.0	
Maximum reverse recovery time (NOTE 1)	t_{rr}	35	ns
Typical junction capacitance (NOTE 2)	C_J	60.0	pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	40.0	$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to 150	$^\circ\text{C}$

NOTES:

- Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
- Measured at 1MHz and applied reverse voltage of 4.0V D.C.
- P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

TYPICAL DEVICE CHARACTERISTICS CURVES ($T_A = 25^\circ\text{C}$ unless otherwise noted)

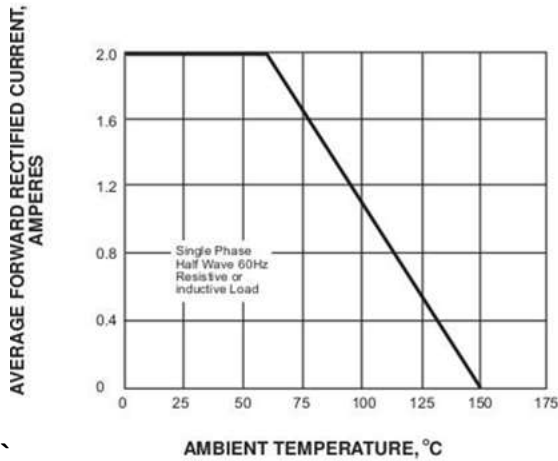


Fig.1 Forward Current Derating Curve

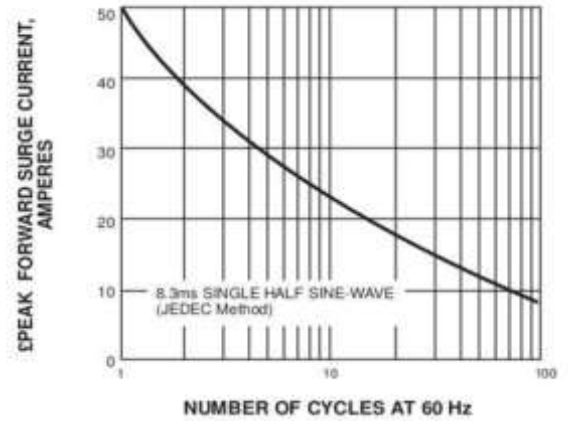


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

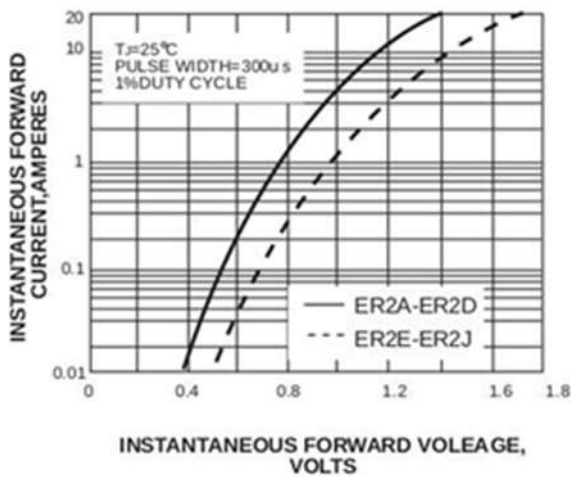


Fig.3 Typical Instantaneous Forward Characteristics

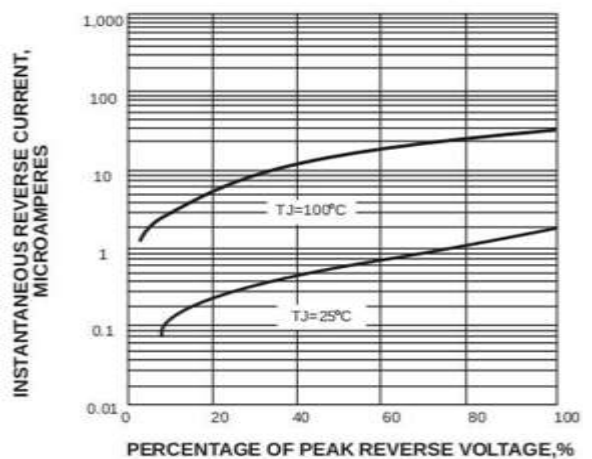


Fig.4 Typical Reverse Characteristics

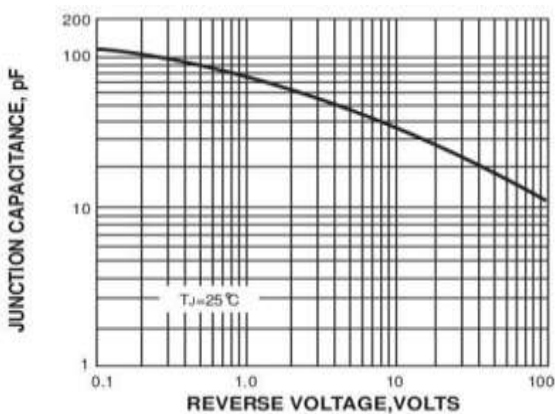


Fig.5 Typical Junction Capacitance

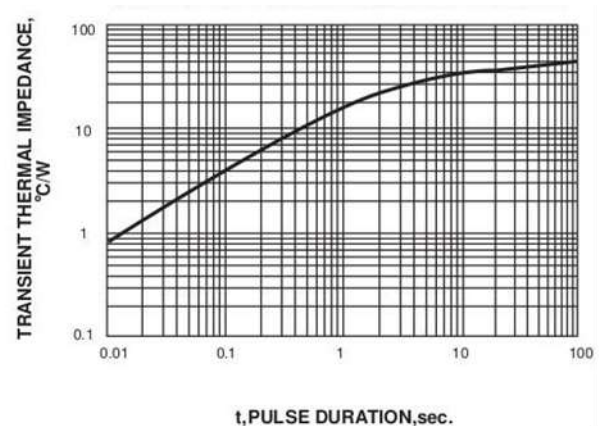
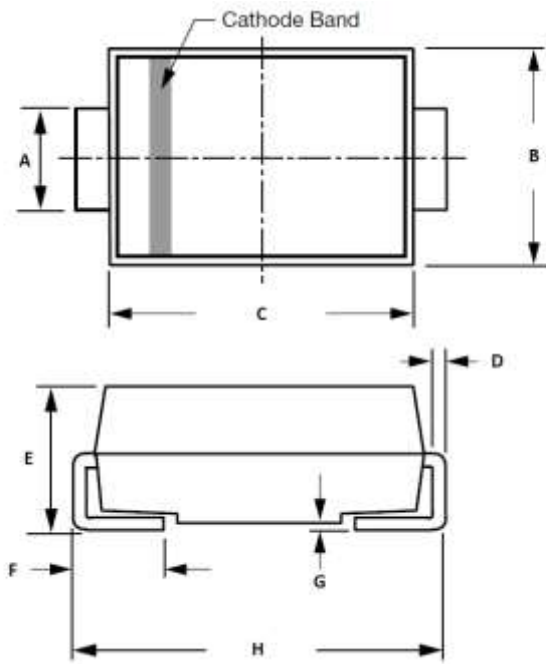


Fig.6 Typical Transient Thermal Impedance

PACKAGE INFORMATION

DO-214AC (SMA)



OUTLINE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.29	2.21	0.051	0.087
B	2.18	2.80	0.086	0.110
C	3.99	4.57	0.157	0.180
D	0.152	0.305	0.006	0.012
E	1.70	2.42	0.067	0.096
F	0.76	1.52	0.030	0.060
G		0.203		0.008
H	4.70	5.66	0.185	0.222

NOTES

- Controlling dimension: millimeters.
- Dimensioning and tolerances per ANSI Y14.5M, 1985.
- Dimensions are exclusive of mold flash and metal burrs.



beyond boundaries...

ALPER2J
DO-214AC (SMA)

CUSTOMER NOTE:

DISCLAIMER

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2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).



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