

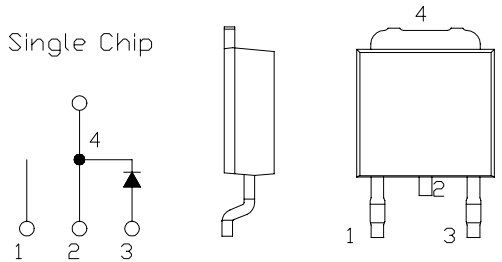
# FRD Type : EA31FS6-F

## OUTLINE DRAWING

### FEATURES

- \* TO-252AA Case, Surface Mounting Device
- \* Packaged in 16mm Tape and Reel
- \* Ultra – Fast Recovery
- \* Low Forward Voltage drop
- \* Low Power Loss
- \* High Surge Capability
- \* 200 Volts thru 600 Volts Types Available

Single Chip



### Maximum Ratings

Approx Net Weight:0.30g

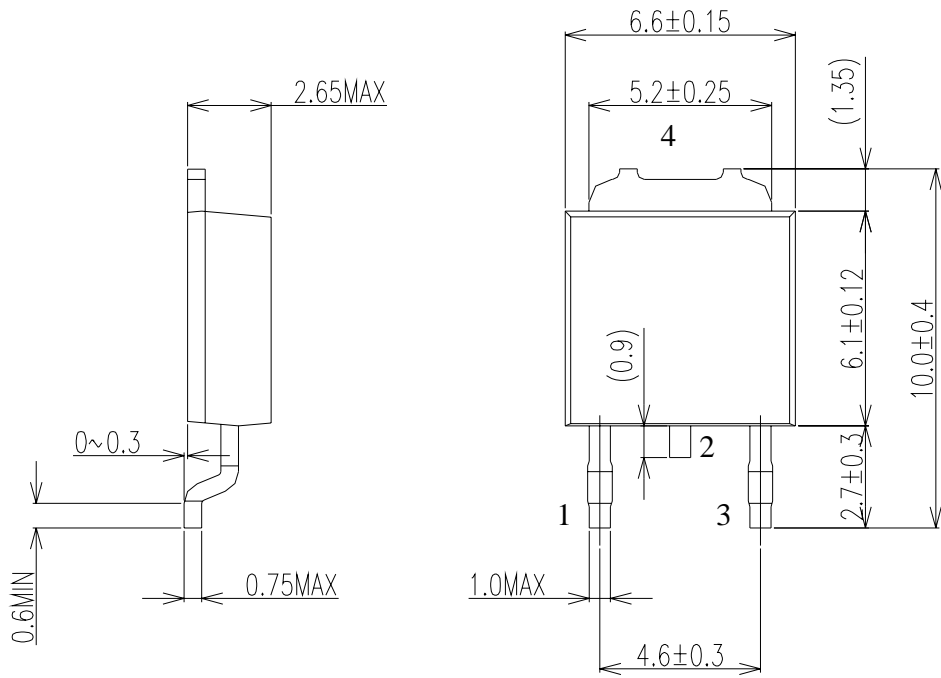
Rating		Symbol	EA31FS6-F			Unit
Repetitive Peak Reverse Voltage		$V_{RRM}$	600			V
Average Rectified Output Current	P.C.Board mounted *	$I_O$	1.2	$T_a=29^{\circ}C$	50Hz Half Sine Wave Resistive Load	A
	-		3.0	$T_c=119^{\circ}C$		
RMS Forward Current		$I_{F(RMS)}$	4.71			A
Surge Forward Current		$I_{FSM}$	45	50Hz Half Sine Wave, 1cycle, Non-repetitive		A
Operating Junction Temperature Range		$T_{jw}$	- 40 to + 150			$^{\circ}C$
Storage Temperature Range		$T_{stg}$	- 40 to + 150			$^{\circ}C$

### Electrical • Thermal Characteristics

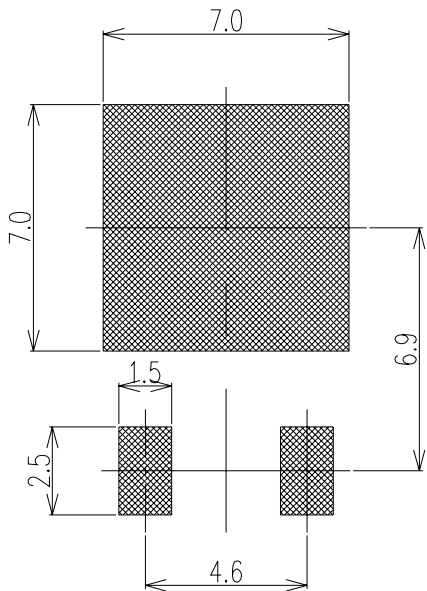
Characteristics		Symbol	Conditions	Min	Typ	Max	Unit
Peak Reverse Current		$I_{RM}$	$T_j=25^{\circ}C, V_{RM}=V_{RRM}$ per Arm	-	-	20	$\mu A$
Peak Forward Voltage		$V_{FM}$	$T_j=25^{\circ}C, I_{FM}= 3 A$ per Arm	-	-	1.7	V
Reverse Recovery Time		$t_{rr}$	$I_{FM}= 3 A,$ $-di/dt= 50 A/\mu s, T_a= 25^{\circ}C$	-	-	35	ns
Thermal Resistance	Junction to Ambient	$R_{th(j-a)}$	P.C.Board mounted *	-	-	80	$^{\circ}C/W$
	Junction to Case	$R_{th(j-c)}$	-	-	-	6	$^{\circ}C/W$

\* Print Land = 20x20 mm

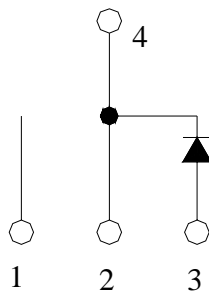
EA31FS6-F OUTLINE DRAWING (Dimensions in mm)



Soldering PAD



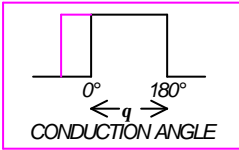
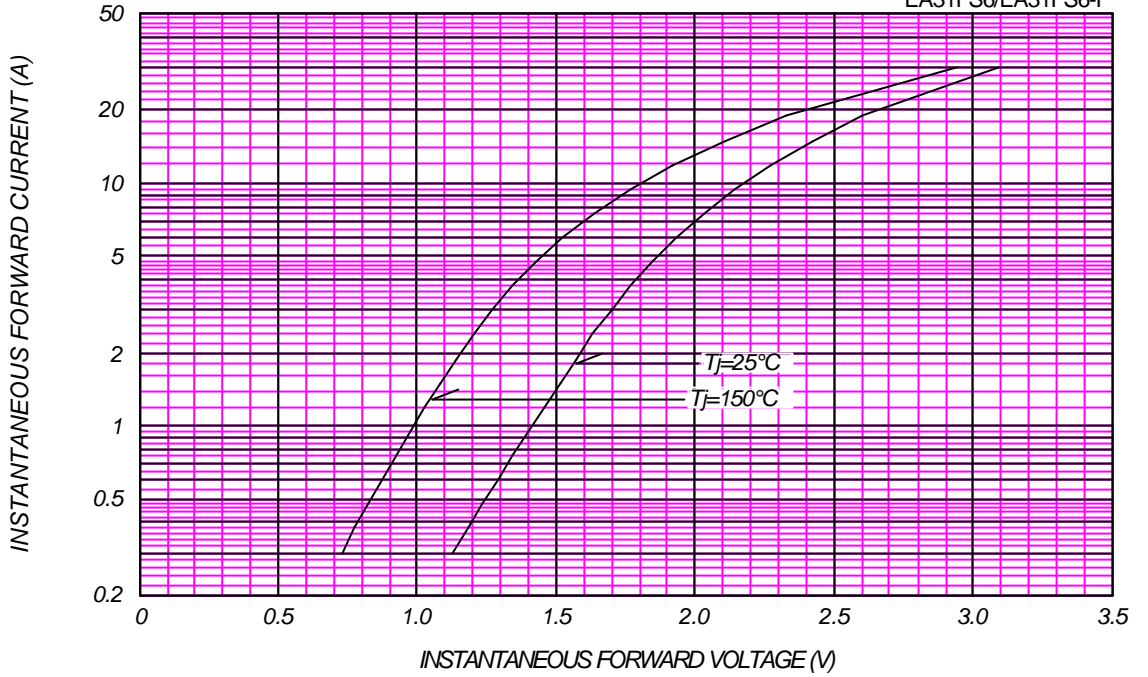
Single



FORWARD CURRENT VS. VOLTAGE

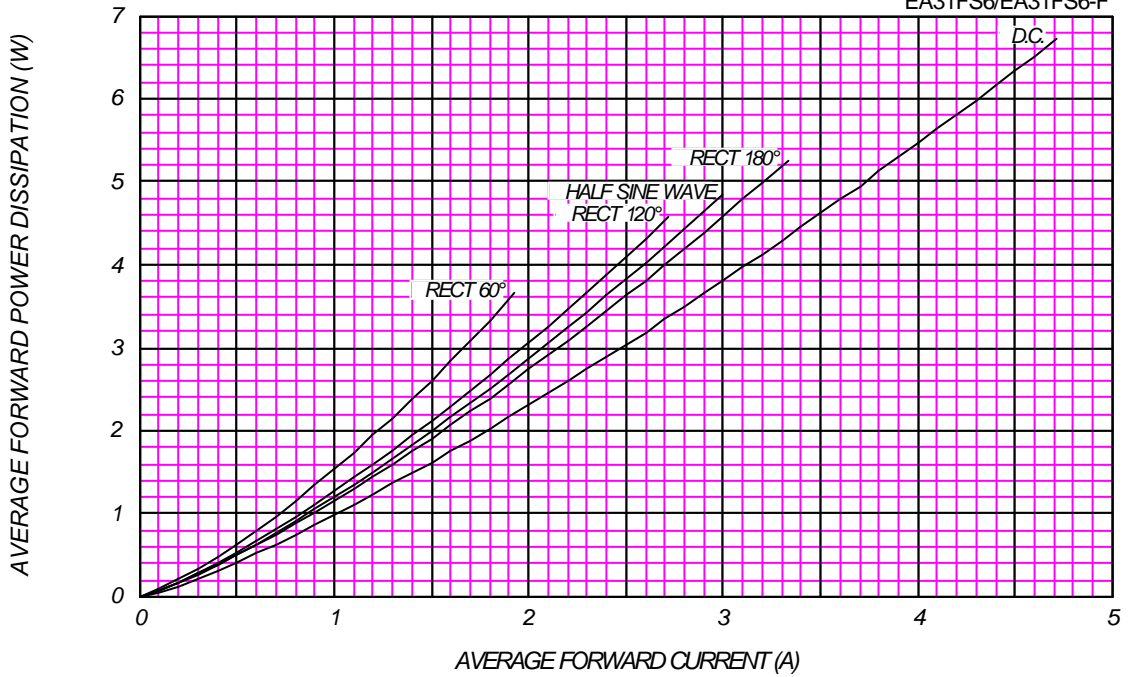
10ms Sine Wave Single Pulse

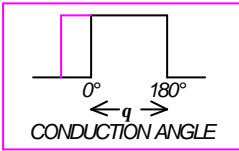
EA31FS6/EA31FS6-F



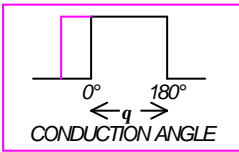
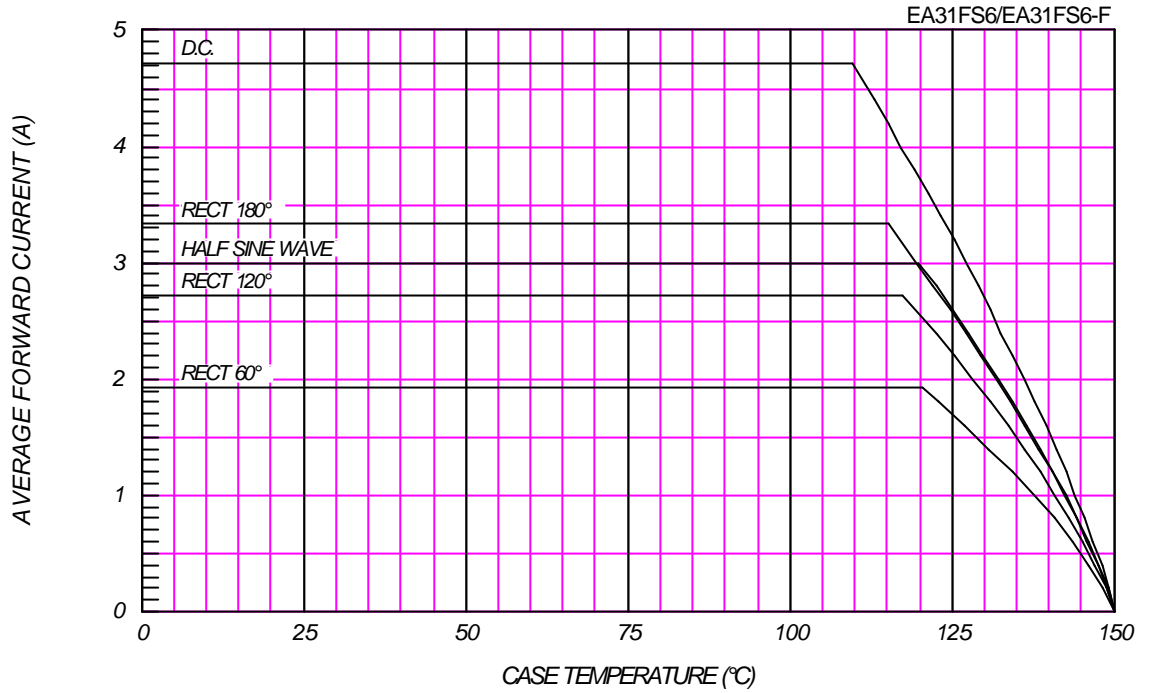
AVERAGE FORWARD POWER DISSIPATION

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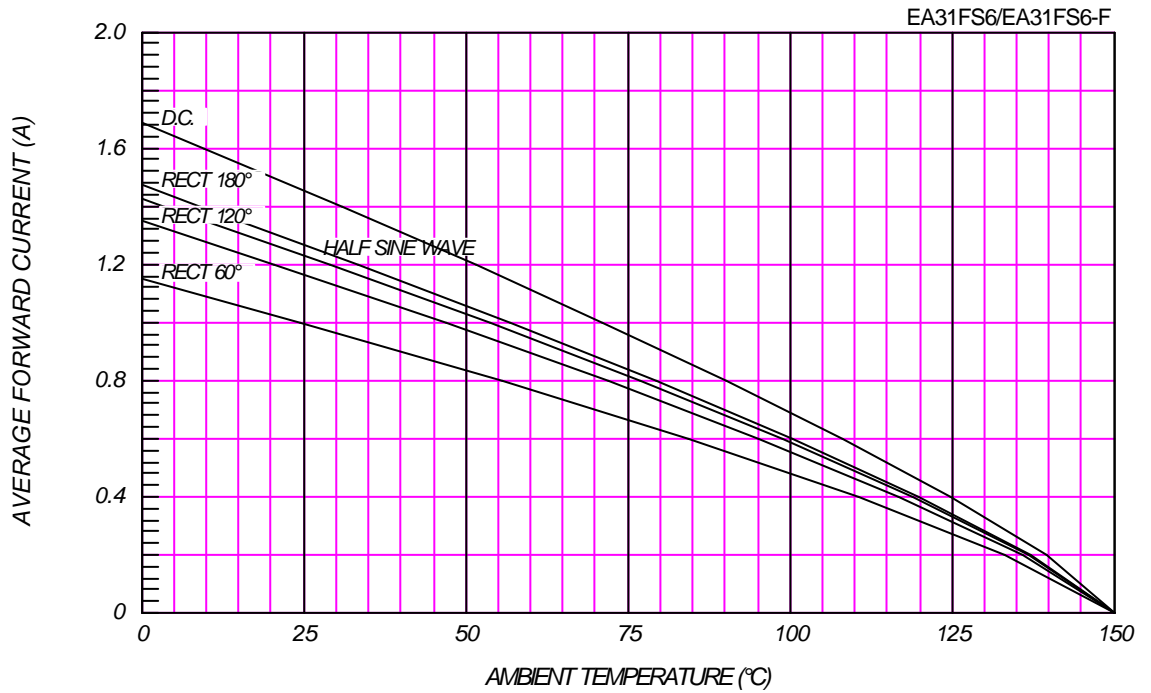


AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE



AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

P.C. Board mounted Print land=20x20mm



# SURGE CURRENT RATINGS

f=50Hz, Half Sine Wave, Non-Repetitive, No Load

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