

#### **Features**

- · Easy Pick And Place
- Fast Recovery Times For High Efficciency
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant(Note 2)("P" Suffix Designates Compliant. See Ordering Information)

## **Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 9°C/W Junction to Case

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR3AB	FR3AB	50V	35V	50V
FR3BB	FR3BB	100V	70V	100V
FR3DB	FR3DB	200V	140V	200V
FR3GB	FR3GB	400V	280V	400V
FR3JB	FR3JB	600V	420V	600V
FR3KB	FR3KB	800V	560V	800V
FR3MB	FR3MB	1000V	700V	1000V

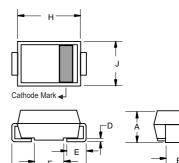
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3.0A	T <sub>c</sub> =115°C
Peak Forward Surge Current	I <sub>FSM</sub>	100A	8.3ms,Half Sine
Maximum Instantaneous Forward Voltage	V <sub>F</sub>	1.30V	I <sub>FM</sub> =3.0A; T <sub>J</sub> =25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I <sub>R</sub>	10μA 150μA	T <sub>J</sub> =25°C; T <sub>J</sub> =125°C
Maximum Reverse Recovery Time FR3AB~FR3GB FR3JB FR3KB~FR3MB	t <sub>rr</sub>	150ns 250ns 500ns	I <sub>F</sub> =0.5A; I <sub>R</sub> =1.0A; Irr=0.25A
Typical Junction Capacitance	CJ	80pF	Measured At 1.0MHz V <sub>R</sub> =4.0V

<sup>\*</sup>Pulse Test: Pulse Width 200 µsec, Duty Cycle 2%

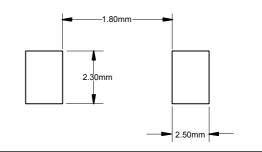
# 3.0 Amp Fast Recovery Silicon Rectifier 50 to 1000 Volts

## DO-214AA (SMB) (LEAD FRAME)



DIMENSIONS						
DIM	INCHES		MM		NOTE	
	MIN	MAX	MIN	MAX	NOTE	
Α	0.079	0.103	2.00	2.62		
В	0.075	0.087	1.91	2.21		
С	0.002	0.008	0.05	0.20		
D	0.006	0.012	0.15	0.31		
E	0.030	0.060	0.76	1.52		
F	0.065	0.091	1.65	2.32		
G	0.200	0.220	5.08	5.59		
Н	0.160	0.191	4.06	4.85		
J	0.130	0.155	3.30	3.94		

## **Suggested Solder Pad Layout**



<sup>1.</sup>Halogen free "Green" products are defined as those which contain < 900 ppm bromine,

<sup>&</sup>lt;900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

<sup>2.</sup> High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.



## **Curve Characteristics**

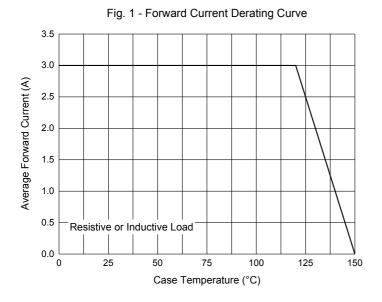


Fig. 3 - Typical Instantaneous Forward Characteristics

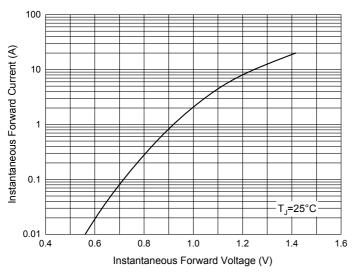


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge

Current

120

80

80

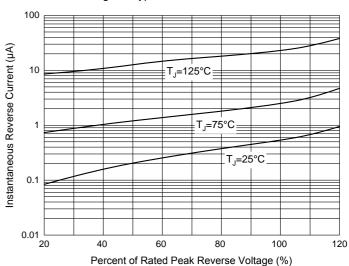
40

8.3 ms Single Half Sine-Wave

0

Number of Cycles at 60 Hz

Fig. 4 - Typical Reverse Characteristics





## **Ordering Information**

Device	Packing	
Part Number-TP	Tape&Reel: 3Kpcs/Reel	

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