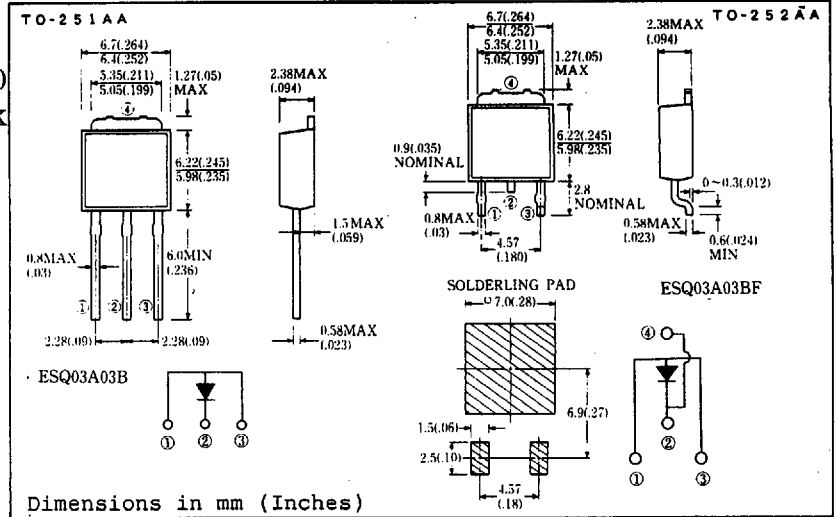


#### FEATURES

- TO-251AA Case (Equiv. to I-PAK)
- TO-252AA Case (Equiv. to D-PAK Surface Mount Device)
- Low Forward Voltage Drop
- Low Power Loss
- High Surge Capability
- Packaged in 16mm Tape and Reel



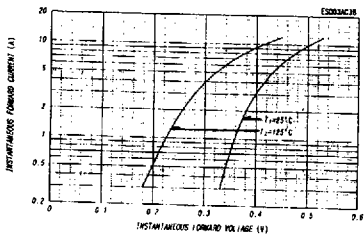
#### MAXIMUM RATINGS

Voltage Rating	Type	ESQ03A03BF ESQ03A03B		Unit
	Symbol			
Repetitive Peak Reverse Voltage	$V_{RRM}$	30		V
Non-Repetitive Peak Reverse Voltage	$V_{RSM}$	—		V
Electrical Rating	Symbol	Condition	Rating	Unit
Average Rectified Output Current	$I_o$	50Hz half sine wave $T_c=113^\circ\text{C}$	3.0	A
RMS Forward Current	$I_{F(RMS)}$		4.7	A
Peak One-cycle Forward Surge Current	$I_{FSM}$	50Hz half sine wave, non-repetitive	150	A
Operating Junction Temperature Range	$T_{jw}$		-40 to 125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$		-40 to 125	$^\circ\text{C}$

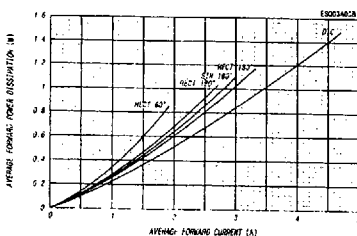
#### ELECTRICAL & THERMAL CHARACTERISTICS

Characteristics	Symbol	Test Condition	Max.	Unit
Peak Forward Voltage	$V_{FM}$	$I_{FM}=3\text{A}$ $T_j=25^\circ\text{C}$	0.398	V
Peak Reverse Current	$I_{RM}$	$V_{RM}=V_{RRM}$ $T_j=25^\circ\text{C}$	10	mA
Thermal Resistance	$R_{th(j-c)}$	Junction to Case	5	$^\circ\text{C/W}$
	$R_{th(j-a)}$	Junction to Ambient (PC Board mounted)	80	

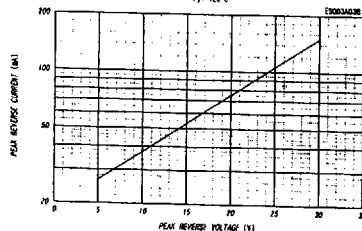
FORWARD CURRENT VS. VOLTAGE



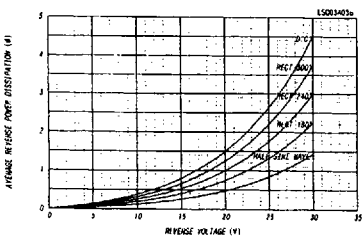
AVERAGE FORWARD POWER DISSIPATION



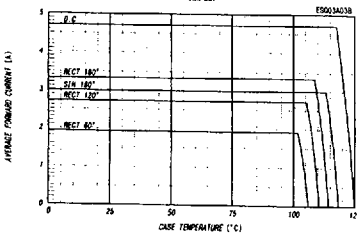
PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE  
Tj = 125°C



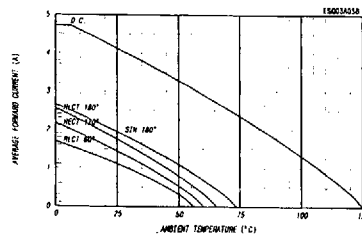
AVERAGE REVERSE POWER DISSIPATION



AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE  
V<sub>FM</sub> = 20V

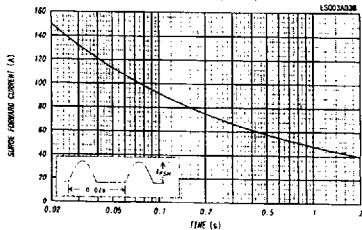


AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE



SURGE CURRENT RATINGS

1/500μs Rise Time, 100μs Fall Time, No Load



JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

Tj = 25°C, 100V/μs, 1000pA, Typical Value

