

## AXIAL LEADED HERMETICALLY SEALED SUPERFAST RECTIFIER DIODE

- Very low reverse recovery time
- Hermetically sealed in Metoxilite fused metal oxide
- Low switching losses
- Low forward voltage drop
- Soft, non-snap off, recovery characteristics

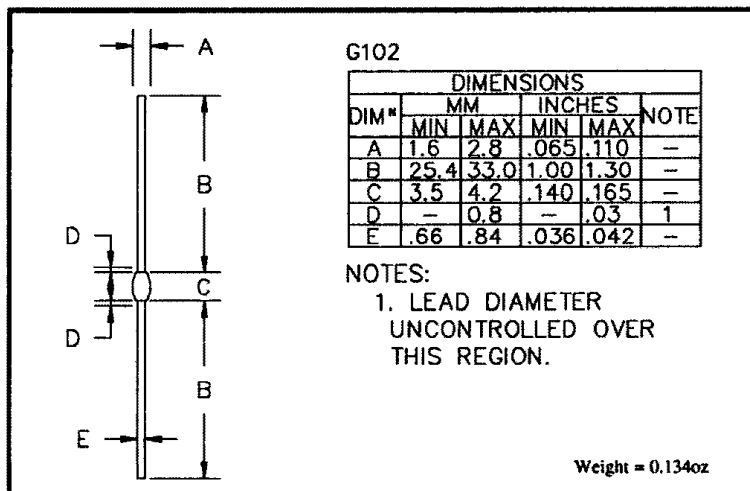
## QUICK REFERENCE DATA

- $V_R = 50 - 150V$
- $I_F = 3.1A$
- $t_{rr} = 30ns$
- $V_F = 1.2V$

### ABSOLUTE MAXIMUM RATINGS (@ 25°C unless otherwise specified)

	Symbol	1N6076 3FF05	1N6077 3FF10	1N6078 3FF15	Unit
Working reverse voltage	$V_{RWM}$	50	100	150	V
Repetitive reverse voltage	$V_{RRM}$	50	100	150	V
Average forward current (@ 55°C, lead length = 0.375")	$I_{F(AV)}$	←	3.1	→	A
Repetitive surge current (@ 55°C in free air, lead length 0.375")	$I_{FRM}$	←	14.0	→	A
Non-repetitive surge current ( $t_p = 8.3ms$ , @ $V_R$ & $T_{jmax}$ )	$I_{FSM}$	←	70.0	→	A
Storage temperature range	$T_{STG}$	←	-65 to +150	→	°C
Operating temperature range	$T_{OP}$	←	-65 to +150	→	°C

### MECHANICAL



These products are qualified to MIL-S-19500/503.

They can be supplied fully released as JAN, JANTX, and JANTXV versions.

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## ELECTRICAL CHARACTERISTICS (@ 25°C unless otherwise specified)

	Symbol	1N6076 3FF05	1N6077 3FF10	1N6078 3FF15	Unit
Average forward current max. (pcb mounted; T <sub>A</sub> = 55°C) for sine wave	I <sub>F(AV)</sub>	←———— 1.30 —————→			A
	I <sub>F(AV)</sub>	←———— 1.40 —————→			A
Average forward current max. T <sub>L</sub> = 70°C; L = 0". T <sub>L</sub> = 55°C; L = 3/8" for sine wave	I <sub>F(AV)</sub>	←———— 6.0 —————→			A
	I <sub>F(AV)</sub>	←———— 3.0 —————→			A
	I <sub>F(AV)</sub>	←———— 3.1 —————→			A
	I <sub>F(AV)</sub>	←———— 3.1 —————→			A
for square wave	I <sub>F(AV)</sub>	←———— 3.1 —————→			A
	I <sub>F(AV)</sub>	←———— 3.1 —————→			A
I <sup>2</sup> t for fusing (t = 8.3mS) max.	I <sup>2</sup> t	←———— 5.1 —————→			A <sup>2</sup> S
Forward voltage drop max. @ I <sub>F</sub> = 3.0A, T <sub>j</sub> = 25°C	V <sub>F</sub>	←———— 1.2 —————→			V
Reverse current max. @ V <sub>RWM</sub> , T <sub>j</sub> = 25°C	I <sub>R</sub>	←———— 5.0 —————→			μA
	I <sub>R</sub>	←———— 100 —————→			μA
@ V <sub>RWM</sub> , T <sub>j</sub> = 100°C	I <sub>R</sub>	←———— 100 —————→			μA
Reverse recovery time 0.5A I <sub>F</sub> to 1.0A I <sub>R</sub> . Recovers to 0.25A I <sub>RR</sub> .	t <sub>rr</sub>	←———— 30 —————→			nS
Junction capacitance typ. @ V <sub>R</sub> = 5V, f = 1MHz	C <sub>j</sub>	←———— 60 —————→			pF

## THERMAL CHARACTERISTICS

	Symbol	1N6076 3FF05	1N6077 3FF10	1N6078 3FF15	Unit
Thermal resistance - junction to lead Lead length = 0.0"	R <sub>θJL</sub>	←———— 8.5 —————→			°C/W
	R <sub>θJL</sub>	←———— 25 —————→			°C/W
Lead length = 0.375"	R <sub>θJL</sub>	←———— 25 —————→			°C/W
Thermal resistance - junction to amb. on 0.06" thick pcb. 1 oz. copper.	R <sub>θJA</sub>	←———— 90 —————→			°C/W