

# AS3594 20 TO 3500 MHz SMT0-8 CASCADABLE AMPLIFIER

*Typical Values* **AS3594**  
**Low Noise Figure** ..... 1.9 dB  
**High Output Power** ..... +24.0 dBm  
**High Performance Thin Film**  
**Standard Size SMT0-8 Package**

## SPECIFICATIONS\*

Parameter	Typical	Guaranteed	
		0 to 50° C	-55 to +85° C
Frequency (Min.)	20-3500 MHz	20-3500 MHz	20-3500 MHz
Small Signal Gain (Min.)	13.5 dB	13.0 dB	12.5 dB
Gain Flatness (Max.)	±0.5 dB	±0.6 dB	±0.7 dB
Noise Figure (Max.) 200-3500 MHz	2.5 dB	2.8 dB	3.0 dB
SWR (Max.) Input/Output	1.7:1	1.8:1	1.9:1
Power Output (Min.) @ 1dB comp.	+24.0 dBm	+22.5 dBm	+22.0 dBm
Reverse Isolation	20.5 dB	—	—
DC Current (Max.)	105 mA	110 mA	115mA

\* Measured in a 50-ohm system at +15 Vdc unless otherwise specified.

## INTERMODULATION PERFORMANCE

*Typical @ 25° C* **AS3594**  
**Second Order Harmonic Intercept Point** ..... +51 dBm  
**Second Order Two Tone Intercept Point** ..... +45 dBm  
**Third Order Two Tone Intercept Point** ..... +35 dBm

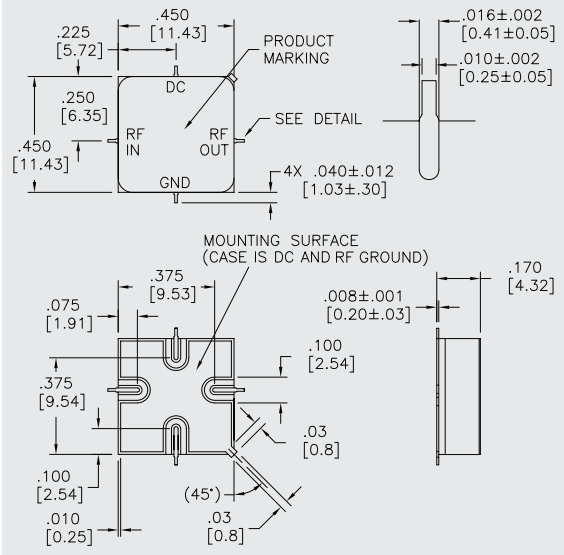
## ABSOLUTE MAXIMUM RATINGS

**Storage Temperature** ..... -62 to +125° C  
**Maximum Case Temperature** ..... +125° C  
**Maximum DC Voltage** ..... +17 Volts  
**Maximum Continuous RF Input Power** ..... +21 dBm  
**Maximum Short Term Input Power (1 Minute Max.)** ..... +24 dBm  
**Maximum Peak Power (3 μsec Max.)** ..... +27 dBm  
**Burn-in Temperature** ..... +125° C  
**Thermal Resistance<sup>1</sup> (θjc)** ..... +11.5° C  
**Junction Temperature Rise Above Case (Tjc)** ..... +18.7° C

<sup>1</sup> Thermal resistance is based on total power dissipation.

## AS3594

**SMT0-8 Package for Amplifiers**



DIMENSIONS ARE IN INCHES [MILLIMETERS]