

# AKT12602 6.0 TO 12.0 GHz HIGH POWER SMA AMPLIFIER

*Typical Values*

**AKT12602**

<b>High Output Power at 1 dB Compressed Point</b> . . . . .	<b>+34 dBm</b>
<b>High Gain</b> . . . . .	<b>38.0 dB</b>
<b>High Reverse Isolation</b> . . . . .	<b>60 dB</b>

## SPECIFICATIONS\*

Parameter	Typical	Guaranteed	
		0 to 50° C	-55 to +85° C
Frequency (Min.)	6.0 - 12.0 GHz	6.0 - 12.0 GHz	6.0 - 12.0 GHz
Small Signal Gain (Min.)	38.0 dB	35.0 dB	33.0 dB
Gain Flatness (Max.)	±0.9 dB	±1.0 dB	±1.0 dB
Noise Figure (Max.)	4.0 dB	6.5 dB	7.0 dB
SWR (Max.) Input/Output:	1.4:1	2.0:1	2.0:1
Power Output (Min.) @ 1dB comp.	+34.0 dBm	+33.0 dBm	+32.0 dBm
Reverse Isolation	60 dB	—	—
DC Current (Max.)	2630 mA	2700 mA	3300 mA

\* Measured in a 50-ohm system at +12 Vdc unless otherwise specified.

## INTERMODULATION PERFORMANCE

*Typical @ 25° C; 6000 MHz*

**AKT12602**

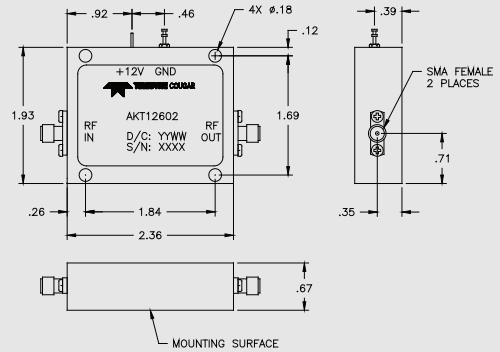
<b>Second Order Harmonic Intercept Point</b> . . . . .	<b>+70 dBm</b>
<b>Second Order Two Tone Intercept Point</b> . . . . .	<b>+64 dBm</b>
<b>Third Order Two Tone Intercept Point</b> . . . . .	<b>+43 dBm</b>

## ABSOLUTE MAXIMUM RATINGS

<b>Storage Temperature</b> . . . . .	<b>-55° to +100° C</b>
<b>Maximum Case Temperature</b> . . . . .	<b>+85° C</b>
<b>Maximum DC Voltage</b> . . . . .	<b>+14.0 Volts</b>
<b>Maximum Continuous RF Input Power</b> . . . . .	<b>+20 dBm</b>
<b>Maximum Short Term Input Power (1µs)</b> . . . . .	<b>+23 dBm</b>
<b>Burn-in Temperature</b> . . . . .	<b>+80° C</b>
<b>Junction Temperature Rise Above Case (Tjc)</b> . . . . .	<b>+70° C</b>

## AKT12602

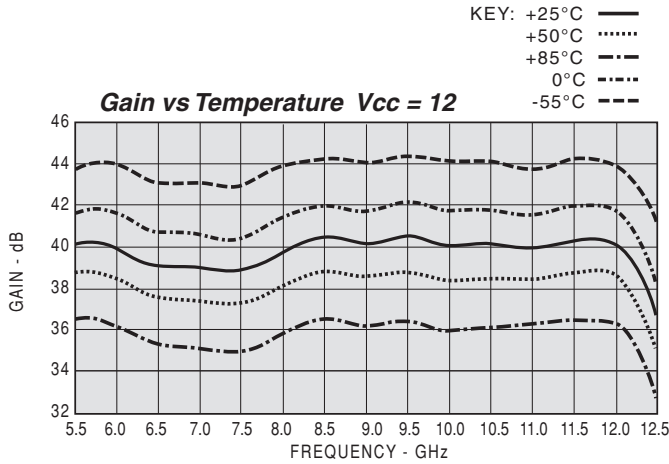
### SMA Amplifier Package



DIMENSIONS ARE IN INCHES

**TYPICAL PERFORMANCE**

**TYPICAL AUTOMATIC TEST DATA**



Model: AKT12602			$V_{cc}=+12V$			$I_{cc}=2630.00$	
FREQ GHZ	SWR IN	SWR OUT	GAIN DB	PHASE DEG	GROUP DELAY NSEC	REV/ISO DB	
5.5	1.11	1.29	40.12	56.17	1.33	-59.20	
6.0	1.15	1.25	39.92	-172.93	01.23	-59.63	
6.5	1.22	1.24	39.05	-18.55	01.11	-66.99	
7.0	1.07	1.29	38.97	143.37	01.10	-62.87	
7.5	1.11	1.27	38.81	-53.89	01.08	-68.78	
8.0	1.09	1.34	39.72	115.09	01.09	-63.18	
8.5	1.20	1.34	40.41	-81.60	01.11	-68.70	
9.5	1.37	1.17	40.49	-116.77	01.13	-60.35	
10.5	1.30	1.29	40.14	-157.03	01.14	-68.46	
11.0	1.16	1.20	39.95	-01.36	01.15	-62.55	
11.5	1.27	1.13	40.33	145.21	01.22	-69.94	
12.0	1.33	1.48	40.10	-83.44	01.35	-67.03	
12.5	1.63	1.37	36.48	32.63	01.36	-74.91	

