

Firework Deconstructed



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Artist: Katy Perry

Song/Album: Firework / Teenage Dream

Songwriter(s): K. Perry, M. Eriksen, T. Hermansen, S. Wilhelm, E. Dean

Week on BB Chart: 1/22/11

Chart Position: #1 Pop Song

Genre: Pop

Sub Genre: Club/Dance Pop

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Length: 3:48

Structure: A-B-A-B-C-B

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Tempo: Mid/Up

First Chorus: 0:54 (24% into the song)

Intro Length: 0:08

Outro Length: 0:20

Primary Tone (Electric/Acoustic): Electric

Primary Instrumentation: Synth

Lyrical Theme: Motivational

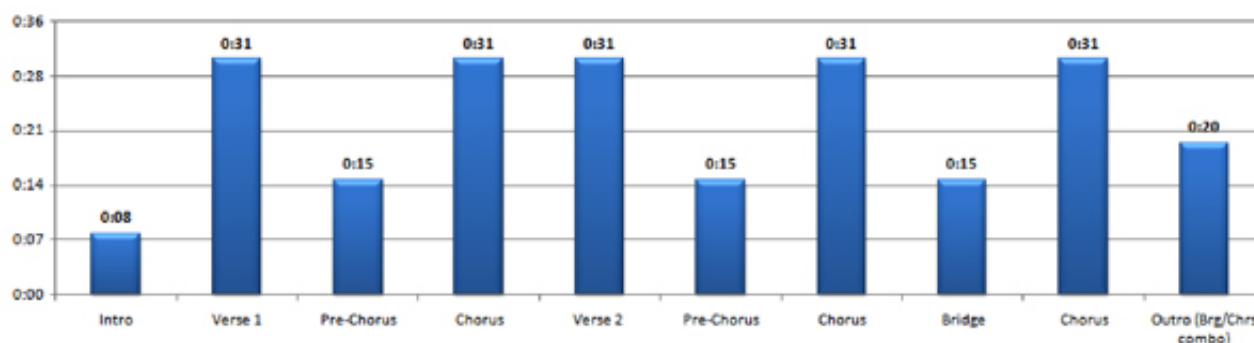
Primary Lyrical P.O.V: 2nd person

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At-a-Glance

	Intro	Verse	P-Chorus	Chorus	Turn	Solo	Bridge	Outro
# Of Occurrences	1	2	2	3	n/a	n/a	1	1
Average Length by Section	0:08	0:31	0:15	0:31	n/a	n/a	0:15	0:20
Section % to Total Song	3%	27%	13%	41%	n/a	n/a	7%	9%

Section Length (Length of each individual section within the song)



As with other Katy Perry songs that we've analyzed, here we see section lengths that are quite uniform in nature. Both the choruses and verses land at 0:31, and the pre-choruses and bridge both land at 0:15.

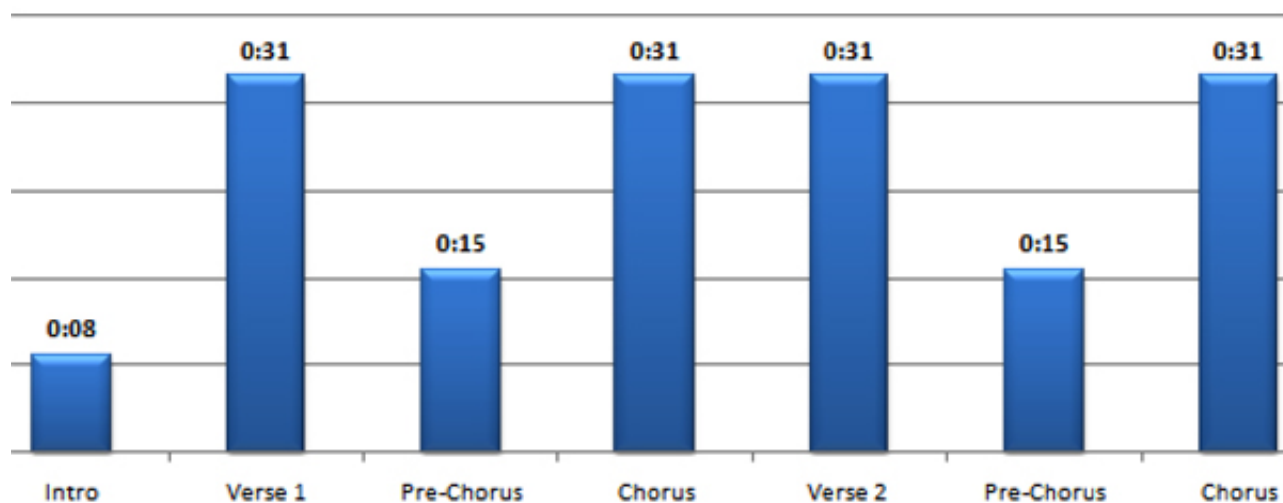
Additionally, continuing with our look at the structural similarities within Katy Perry hits, below is a recap followed by three section length graphs showing the similarities between Katy's three most recent #1 hits: "Firework", "Teenage Dream" and "California Gurls." As you'll see, from the intro through the second chorus of each song, not only is the song structure identical, but the section lengths are almost identical as well. The only real difference is that the second verse in "Firework" is a full verse, where "Teenage Dream" and "California Gurls" both have half verses.

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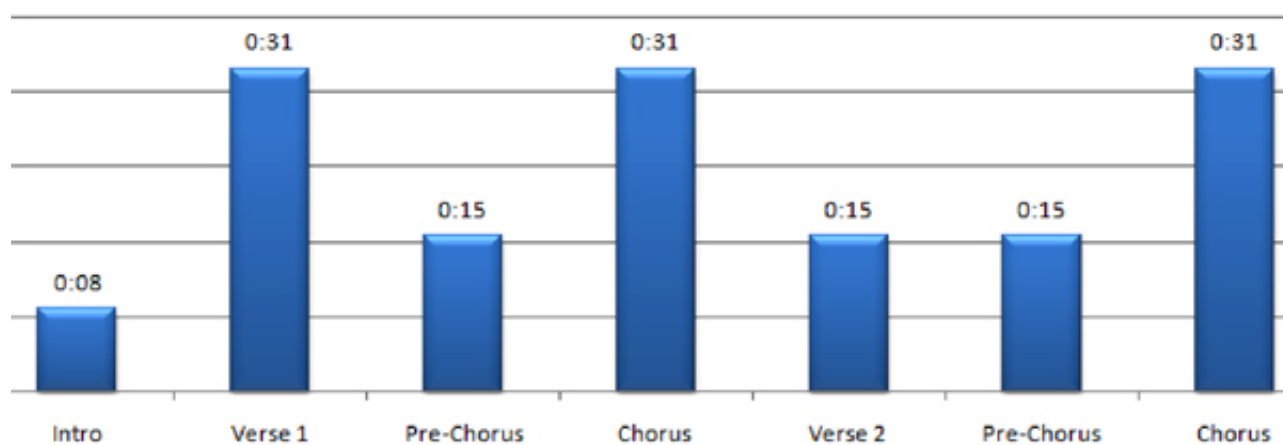
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Section	Firework	Teenage Dream	California Gurls
Intro	0:08	0:08	0:04
Verse 1	0:31	0:31	0:31
Pre-Chorus	0:15	0:15	0:17
Chorus	0:31	0:31	0:32
Verse 2	0:31	0:15	0:15
Pre-Chorus	0:15	0:15	0:16
Chorus	0:31	0:31	0:32

Firework:



California Gurls:

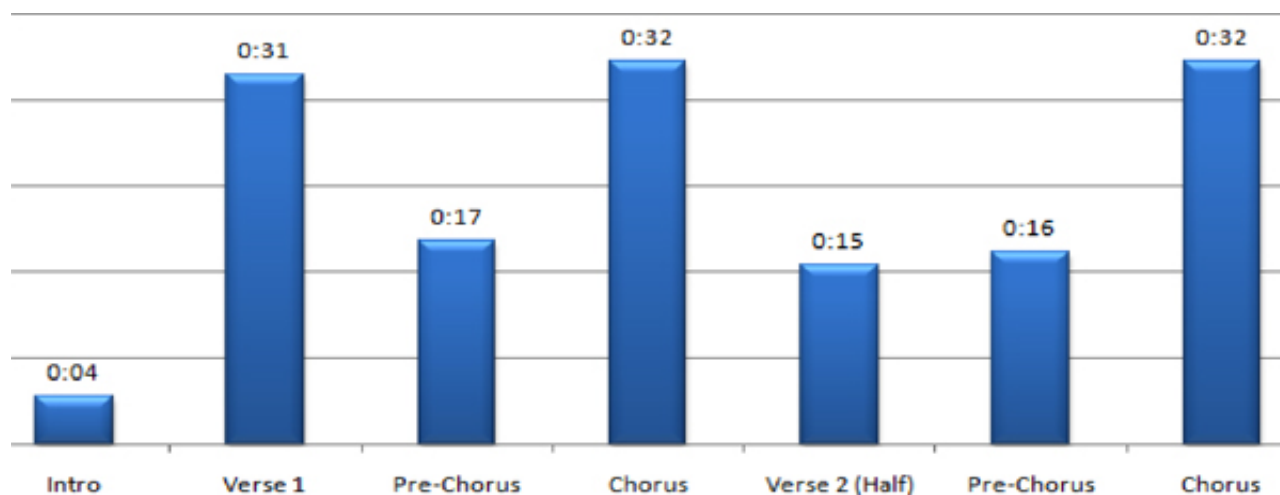


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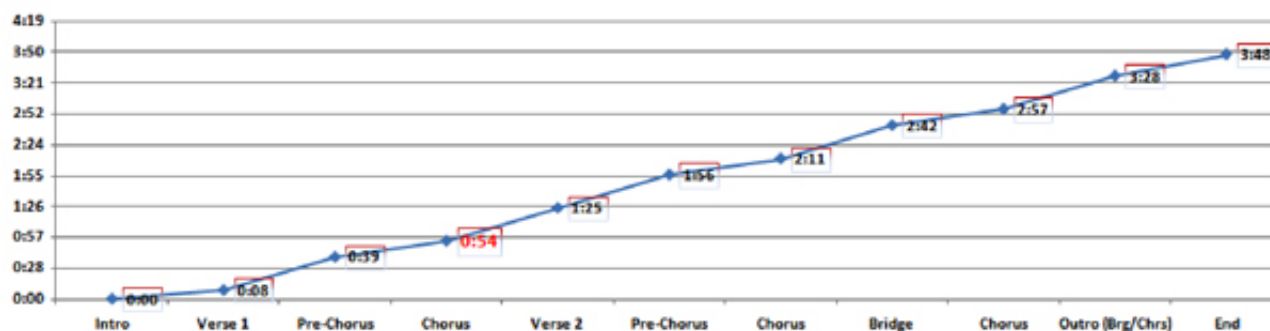
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Teenage Dream:



Structure Timeline (Shows when each section hits within the timeline of the song)

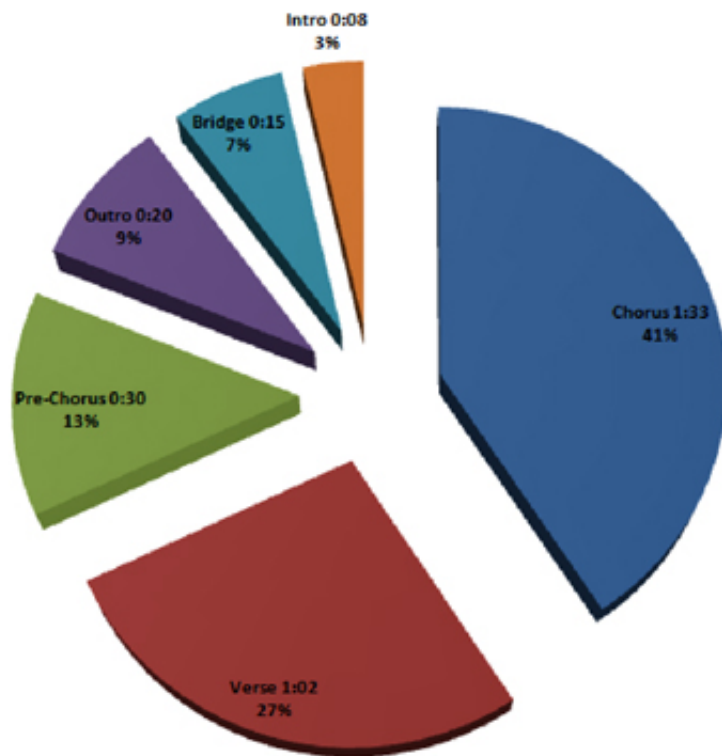


Total Section Analysis (Total time consumed by each section and its percentage of the total song)

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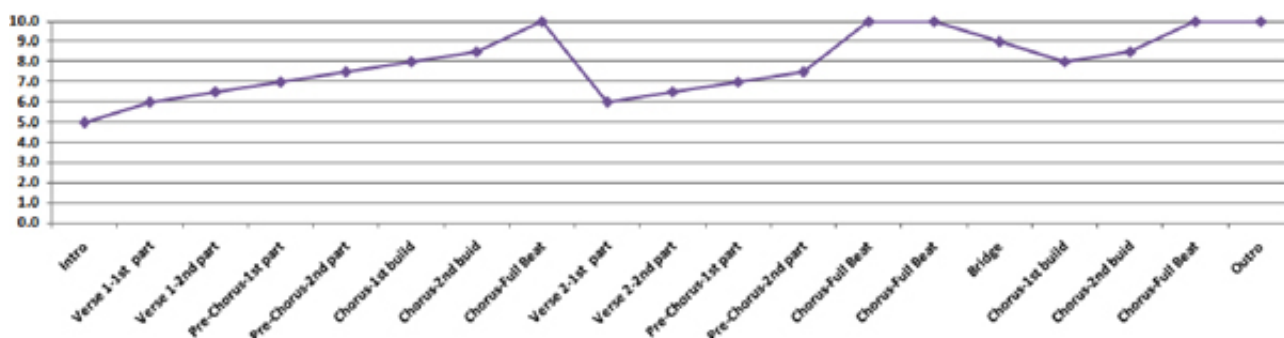
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It's obvious when looking at the chart above that the focal point of "Firework" resides in that inspirational chorus, comprising 41% of the total song. The verse follows at 27%.

Back on the topic of Katy Perry #1 hit similarities; it's interesting to note that her last three #1 hits all had their choruses account for between 39% and 42% of the total song.

Momentum/Intensity Factor (Evaluation of the intensity of each section within the song timeline on a scale of 1 – 10, 10 being the most intense)



Katy Perry's "Firework" is characterized by gradual builds in momentum, tension and intensity that eventually lead to the payoff in the "club" section of the chorus.

The song kicks off with the light synth instrumental theme before the "vacuum swoosh" leads us into the first verse. The first verse continues with the same synth theme as the intro, seeing

the momentum bumped up a notch with the addition of Katy's vocals. At the **0:23** (second half of the 1st verse), the intensity is brought up yet again with the rise in inflection of Katy's vocal delivery and the addition of some sporadic percussion (shaker sound).

At **0:39** we see the whole dynamic of the song change as we enter the pre-chorus. The tension builds throughout and is fostered by the rising inflection and intensity of Katy's vocals coupled with the addition of the string section.

At **0:54** we enter the chorus, which at this point is just a more intense version of the pre-chorus with the addition of the background "airy" synth and fast picked bass. At **1:02** we see yet another increase in intensity, with the addition of the electronic drum fills and shift in Katy's vocal delivery to one of increased urgency. At **1:10**, we finally get the "payoff" as we enter the club beat section of the chorus. The momentum reaches a peak here, alleviating all of the tension that had been building since the pre-chorus.

This overall pattern continues through the 2nd verse and pre-chorus, with the exception that the 2nd chorus kicks in with the full "club" beat instead of gradually building as was done in the first chorus.

The intensity then drops off a slight notch during the bridge, before going back into the same chorus build that was characteristic of the first chorus. The momentum of the "club" beat section of the chorus is then carried through the outro section (which is basically a chorus/bridge combo) all the way through to the false end.

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Intro: 8/10

As with her previous #1 hit, "Teenage Dream", the intro section in "Firefly" is just the instrumental portion of the verse. Its unique synth sound serves as an "identifying factor" for the song (i.e. the second you hear it, you'll know what song it is). Overall, it's simple and effective, setting the vibe and leading seamlessly into the first verse.

Verses: 8.5/10

The verse sections within "Firework" are very effective on a number of levels:

- Katy's vocal delivery makes you feel like she's talking to YOU.
- The constant use of repetition in the vocal phrasing instantly engrains the melody in your head and fosters memorability.
- The simplicity of the music within the section enables Katy's vocals and lyrics to stand out in the mix, which is important considering that this is a motivational themed song.
- The up-front grooving beat preps and gets you in the mood for the "club/dance" section of the chorus.

Pre-Chorus: 9/10

The pre-chorus within "Firework" is very strong for reasons including:

- It completely shifts gears from the vibe and melody established in the verse, engaging the listener at a whole new level.
- Katy's vocal delivery does a great job of accentuating the increasing tension through the rising inflection and intensity in her voice.
- The strings provide the perfect backdrop against Katy's vocals, aiding in the intensity build.
- Through the increasing tension, the listener knows that some grand payoff is coming, and this pre-chorus does a great job of taking the listener on the journey to the payoff in the club section of the chorus.

Chorus: 9.5/10

Comprising 41% of the total song, it's not a surprise that the chorus is the strongest section of the song. Right after the first pre-chorus, you're expecting to be "swooshed" into an all out, beat driven chorus. It doesn't happen. The first section of the chorus is a tease, continuing to build on the tension that was established during the pre-chorus. The addition of the airy synth "drone", drum fills and building intensity in Katy's vocals bring the tension to the brink, before entering the club/dance payoff during the last section of the chorus. The lyrics are spot on as well, hitting with a motivational message that is sure to inspire.

Bridge: 8/10

Musically, the bridge provides a good departure from the rest of the song without losing any real momentum that was gained during the chorus (specifically due to the continuation of the driving beat). I would have to assume that the reason why there isn't any huge shift in momentum is because this will no doubt be played in the clubs, and the momentum will need to keep moving. The "fuzz" synth adds new character and flavor, and that coupled with Katy's repetition of the last word on each line really makes for a memorable section. Lyrically, it doesn't break from the messaging established in the chorus.

Outro: 8.5/10

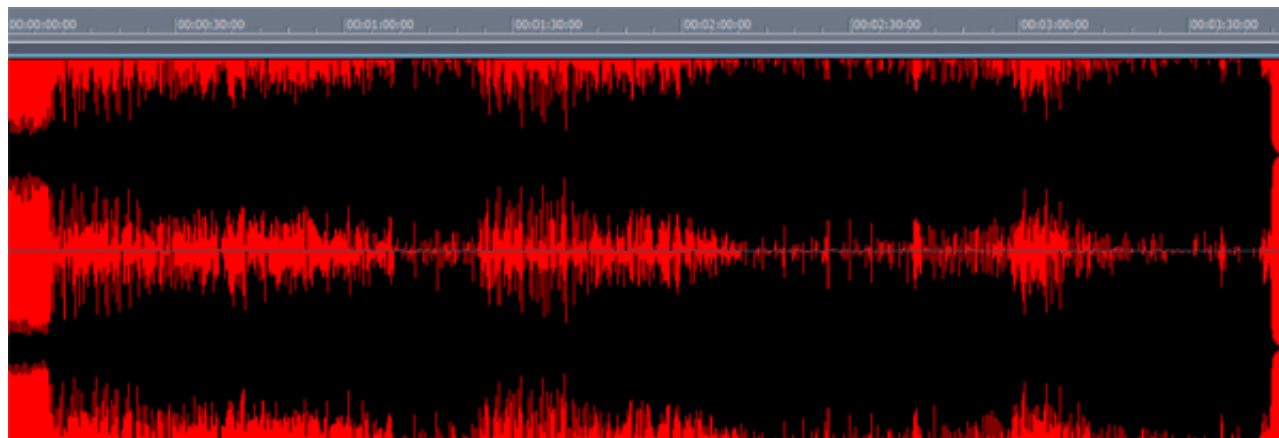
The outro continues the momentum and melody of the chorus with the addition of the lyrics from the bridge. It's effective and provides a great summation of the song, leading into the false ending.

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As with the vast majority of other current hit Pop songs, “Firework” is quite compressed for maximum sonic impact (especially during the “club” section of the chorus). That being said, it doesn’t seem to be as overly compressed as a lot of other current hit Pop songs are. In the above graphic, I’ve added white lines to filter through some of the noise to show how the increase in levels corresponds with the increasing momentum, tension and intensity during the sectional builds.

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INTRO	Tone/Comments	Pan
Synth	Bright / Airy	10:00 – 12:00
Synth	Mid tone / volume fades during section	2:00
Perc	Click / sticks	10:00
Effect	Reverse “Air Swoosh” into 1 st verse	3:00 – 12:00

VERSE	Tone/Comments	Pan
Lead Vocal	Katy Perry – up front in the mix	12:00
Synth	Bright / Airy	10:00 – 12:00
Bass	Synth Bass – mid level in the mix	12:00
Electronic Drums	Kick (12:00), Snare (11:00 main, 12:00 fill)	Mixed
Perc	Claps	3:00
Perc	Shaker (enters and fades out quickly at 2 nd half)	12:00
<i>Bass (during the 2nd verse)</i>	<i>More up front and prevalent in the mix</i>	<i>12:00</i>

PRE-CHORUS	Tone/Comments	Pan
Lead Vocal	Katy Perry – up front in the mix	12:00
Synth	Layered Strings – up front in the mix - primary at 12:00	9:00 – 3:00

CHORUS	Tone/Comments	Pan
Lead Vocal	Katy Perry – up front in the mix	12:00
Background Vocals	Katy Perry Overdubs – primary at 12:00	11:00 – 2:00
Synth (prior to the “club” part)	Layered Strings – primary pan shifts 10:00 – 12:00	9:00 – 3:00
Synth (1 st & 2 nd sections of chorus)	Bright Airy Drone (primary at 12:00, pans through mix)	9:00 – 3:00
Bass	Mid – low in the mix – fast “picked” rolling	11:00
Electronic Drums	Snare fill leading into 3 rd “club beat” part of chorus	10:00
Electronic Drums	Heavy Kick, snare and hat club beat	12:00
Synth	Individual “bubble” hits	3:00
Synth (during the “club” part)	Layered Strings - Primary at 12:00 – underneath the beat	9:00 – 3:00
Bass (during the “club” part)	More prevalent in the mix than earlier	12:00

BRIDGE	Tone/Comments	Pan
Lead Vocal	Katy Perry – up front in the mix	12:00
Bass	Mid level in the mix	11:00 – 12:00
Synth	Fuzz Synth	12:00 – 3:00
Electronic Drums	Kick and Snare	11:00 – 12:00

OUTRO	Tone/Comments	Pan
Lead Vocal	Katy Perry – up front in the mix	12:00
Background Vocals	Katy Perry Overdubs	11:00 – 2:00
Synth	Layered Strings - Primary at 12:00 – underneath the beat	9:00 – 3:00
Bass	Mid level in the mix	11:00 – 12:00
Electronic Drums	Heavy kick, snare and hat club beat	12:00
Synth	Airy Synth – back of the mix – grows toward the end	9:00

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Compares the song being analyzed to all Pop songs that have entered the Billboard Pop top 10, Q1 through Q4-2010.

CATEGORY	Teenage Dream	Y-T-D: All Top 10 Pop Songs	Comparison
Song Structure	A-B-A-B-C-B	A-B-A-B-C-B (Majority)	In-Line
Song Length	3:48	3:47 (Average)	In-Line
Intro Length	0:08	0:13 (Average)	-0:05
Outro Length	0:20	0:21 (Average)	-0:01
Time For 1 st Chorus To Hit	0:54	0:37 (Average)	+0:17
% Of Song Where 1 st Chorus Hits	24%	17% (Average)	+7%
Tempo	Mid/Up	Mid/Up (Majority)	In-Line
Tone (Acoustic/Electric based)	Electric	Electric (Majority)	In-Line
Primary Instrumentation	Synth	Synth (Majority)	In-Line
Primary Vocal Gender	Female	Male (Majority)	Not In-Line
Pre-Chorus	Yes	48%	In-Line
Solo	No	11%	In-Line
Bridge	Yes	81%	In-Line
Lyrical Theme	Motivational	Love/Relationships	Not In-Line
Style	Synth/Dance Pop	Electro +	In-Line

The key elements present in “Firework” are in-line with all year-to-date top 10 Pop hits EXCEPT:

- The song is sung by a female and not a male.
- The intro length is 0:10 shorter than the average hit Pop song.
- The first chorus kicks in 0:17 (7%) later into the song than the average top 10 Pop song. This is primarily due to the addition of the pre-chorus section.
- The lyrical theme is motivational in nature, as opposed to a love/relationship theme which is present in the majority of top 10 hit Pop songs.

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Structure: 9/10

Does the song flow in a cohesive manner? Keeping in line with most other Katy Perry songs, "Firework" is supremely structured. Even with the total shift in melody and momentum from the verse into the pre-chorus, it flows seamlessly. All of the sections build well upon each other, gradually increasing the momentum and intensity throughout before peaking with the club beat section of the chorus.

Production: 8.5/10

How does the production stand up in maximizing the songs impact? The production is solid, with each instrument coming through crystal clear in the mix. Katy's vocals are up-front along with the drums, specifically to accentuate the motivational themed lyrics and dance/club vibe. The only negative is that the levels run a little hot during the club/dance section of the chorus. This is great for the clubs, but will most likely cause some distortion on less expensive speakers.

Tone: 9/10

Does the instrumentation and sound maximize the vibe of the song? All of the instrumentation, including the airy synths, electronic drums, string sections, etc... have that upbeat synth pop/club/dance tone that suits the vibe of the song perfectly.

Lyrics: 9.5/10

Do the lyrics serve the song and jibe with the vibe of the music? The lyrics in "Firework" are motivational in nature and are extremely effective in the messaging. They're simple and universal, and deal with a topic that anyone can identify with.

She does a great job setting the scene for the chorus payoff during the other sections, first **asking the listener** during the verse, "do you ever feel paper thin, like a plastic bag, etc...", before **telling the listener what to do** during the pre-chorus (i.e. "ignite the light and let it shine..."), and then **telling them WHY** during the chorus ("cause baby you're a firework..."). All in all, the lyrics coupled with the constantly building instrumental and vocal intensity and finally culminating with the payoff in the chorus make for an exceptionally effective motivational song.

Vocal Delivery: 9/10

Does the tonality and phrasing of the vocals maximize the songs impact? Katy does a great job of delivering her vocals in a manner that her audience can identify with. She comes across more as a "friend" in nature than a pop star telling you what to do. This no doubt resonates with her younger listeners. At times during the increasing intensity of the song, it does feel like Katy is reaching outside her normal vocal comfort zone, but she hits it just right. It gives her vocals more of an intense, real vibe that hammers home the messaging in the lyrics.

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Memorability: 9/10

How easy is it to remember this song after you hear it once? Every section within "Firework" is exceptionally memorable, specifically due to great vocal phrasing, motivational lyrics that are

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both engaging and simple enough to remember, and the constant use of instrumental and vocal repetition throughout the song.

Originality: 7/10

Does this song have its own unique vibe when compared to other songs/artists in the genre? As with all of her other songs, "Firework" definitely has the "Katy Perry sound" and is easily identifiable as such. That being said, there really isn't anything else that separates it from all of the other synth pop/club/dance songs that are out there in the current Pop genre. It sounds like "one of the bunch."

Longevity: 9/10 (Artist), 4/10 (Overall genre Genre)

Does this song have what it takes to stand the test of time? Will it become a staple of the artist's repertoire? Again, as with all of her other #1 hits, there is no doubt that "Firework" will become a staple highlight in Katy Perry's catalog. It's an extremely catchy, memorable and inspiring Pop song that will resonate with her fans for the duration of her career and beyond. That being said, there is nothing overtly special about this song that will enable it to stand the test of time along other Pop greats once the genre moves in a new direction. The exception would be when a motivational themed song is needed for some type of teen girl event or TV/Movie licensing deal.

[Conclusion: 9/10](#) [Back to Top](#)

The Good:

- "Firework" is exceptionally well crafted and memorable.
- The song makes great use of momentum, tension and intensity shifts.
- The lyrics convey a motivational message that is universal in nature and sure to resonate with her fan demographic when they need some inspiration in their lives.
- Katy's vocal delivery comes across on a "friend" level, further enabling the song to connect with its audience.

The Bad:

- The levels during the "club" part of the chorus run a little hot, which may distort in less expensive/smaller speakers.
- Even though "Firework" is a very catchy, memorable and inspiring Pop song, there is nothing overtly special about it that will enable it to stand the test of time in the overall Pop genre.

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There are a few primary factors that work together in making "Firework" a hit:

1. **The Music:** "Firework" does a great job of taking the listener on an emotional journey, instantly engaging them from the intro and leading them through growing tension, momentum and intensity, eventually culminating in the grand payoff of the chorus.
2. **The Lyrics:** The lyrics are motivational, inspirational and universal in nature, easily connecting with her listeners.
3. **Memorability:** "Firework" possesses a number of highly memorable factors, including the constant use of repetition (both vocally and instrumentally), great vocal phrasing and engaging lyrics.
4. **Hot Streak:** Katy Perry is still very much in the spotlight due to her recent press in the media, upcoming tour and continued chart topping success of her "Teenage Dream" album.

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- If you're looking to write a motivational themed song such as "Firework", try to **keep your lyrics toward the simple and universal side** to maximize your chances of connecting with the largest possible audience. You want people to be able to instantly connect with your messaging, and not have to "work at it."
 - **Prosody** is an extremely important aspect of any well crafted song. Note how the music in "Firework" works in tandem with the lyrics in accentuating the motivational themed vibe of the song.
 - The use of **Repetition** is extremely important, both vocally and instrumentally. This will help to foster memorability and ingrain your song in the listeners head. Repetition is rampant throughout "Firework", occurring in all sections of the song.
 - Try incorporating builds in **momentum, tension and intensity** throughout your song. This will further engage the listener, and make the payoff (i.e. your chorus) even more effective. Notice how this is very well achieved in "Firework" (refer to the momentum/intensity graph).