LineSpec (Line Specification)

Line specification

Description

Plotting functions accept line specifications as arguments and modify the graph generated accordingly. You can specify these three components:

- Line style
- Marker symbol
- Color

For example:

```
plot(x,y,'-.or')
```

plots `y` versus `x` using a dash-dot line (`-.`), places circular markers (`o`) at the data points, and colors both line and marker red (`r`). Specify the components (in any order) as a character vector after the data arguments. Note that linespecs are not name-value pairs.

Plotting Data Points with No Line

If you specify a marker, but not a line style, only the markers are plotted. For example:

```
plot(x,y,'d')
```

Line Style Specifiers

You indicate the line styles, marker types, and colors you want to display, detailed in the following tables:

Specifier	LineStyle
'-'	Solid line (default)
'--'	Dashed line
':'	Dotted line
'-.'	Dash-dot line

Marker Specifiers

Specifier	Marker Type
'+'	Plus sign
'o'	Circle
'*'	Asterisk
'.'	Point
'x'	Cross
'square' or 's'	Square
'diamond' or 'd'	Diamond
'^'	Upward-pointing triangle
'v'	Downward-pointing triangle
'>'	Right-pointing triangle
'<'	Left-pointing triangle
'pentagram' or 'p'	Five-pointed star (pentagram)
'hexagram' or 'h'	Six-pointed star (hexagram)

Color Specifiers

Specifier	Color
r	Red
g	Green
b	Blue
c	Cyan
m	Magenta
y	Yellow
k	Black
w	White

Related Properties

This page also describes how to specify the properties of lines used for plotting. MATLAB® graphics give you control over these visual characteristics:

- `LineWidth` — Specifies the width (in points) of the line.
- `MarkerEdgeColor` — Specifies the color of the marker or the edge color for filled markers (circle, square, diamond, pentagram, hexagram, and the four triangles).
- `MarkerFaceColor` — Specifies the color of the face of filled markers.
- `MarkerSize` — Specifies the size of the marker in points (must be greater than 0).

In addition, you can specify the `LineStyle`, `Color`, and `Marker` properties instead of using a line specification character vector. This is useful if you want to specify a color that is not in the list by using RGB triplet values. See Line Properties for details on these properties.

Examples

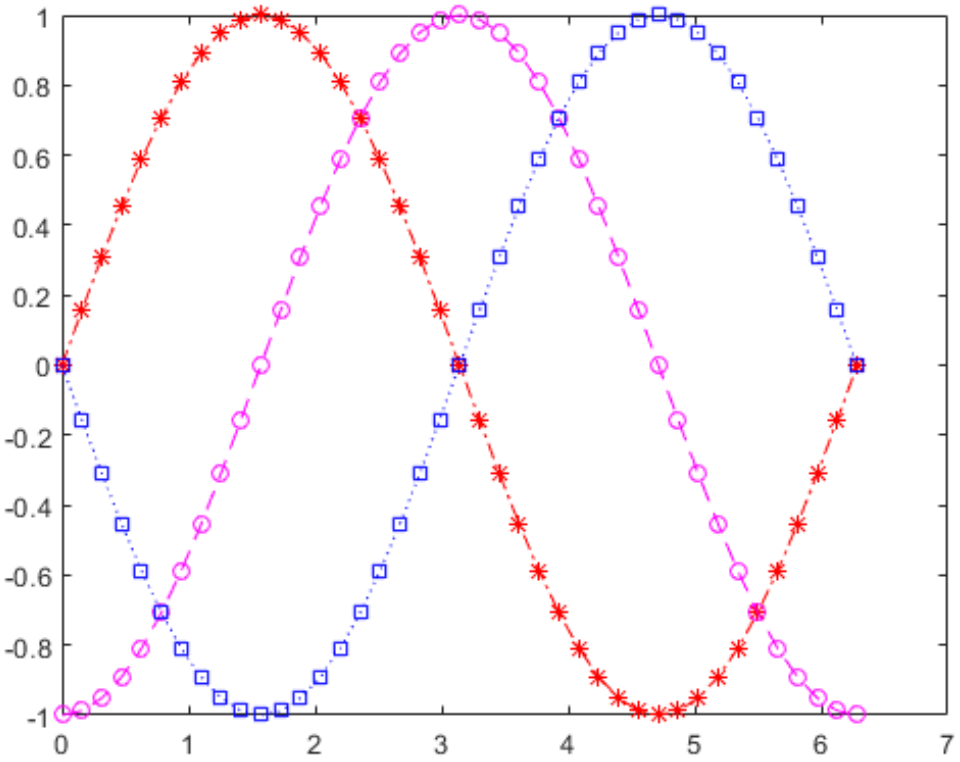
collapse all

Modify Line Appearance

Plot the sine function over three different ranges using different line styles, colors, and markers.

Try it in MATLAB

```
figure
t = 0:pi/20:2*pi;
plot(t,sin(t),'-.r*')
hold on
plot(t,sin(t-pi/2),'--mo')
plot(t,sin(t-pi),':bs')
hold off
```

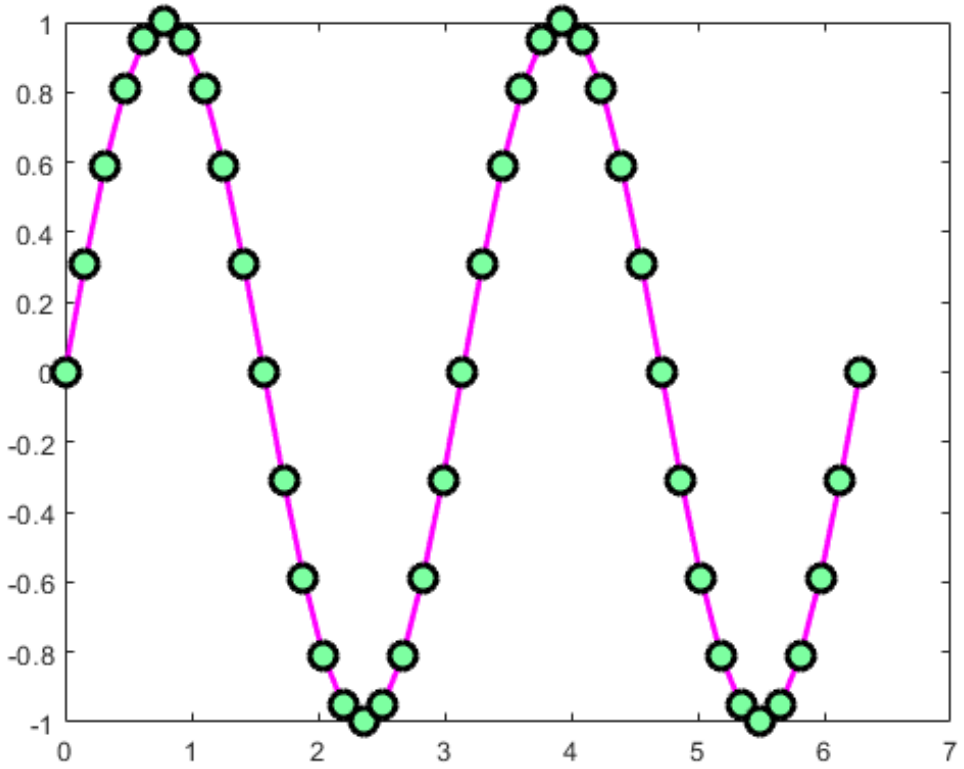


Set Line Properties

Create a plot illustrating how to set line properties.

Try it in MATLAB

```
t = 0:pi/20:2*pi;
figure
plot(t,sin(2*t),'-mo',...
    'LineWidth',2,...
    'MarkerEdgeColor','k',...
    'MarkerFaceColor',[.49 1 .63],...
    'MarkerSize',10)
```



See Also

`axes` | `line` | `patch` | `plot` | `set` | `surface`