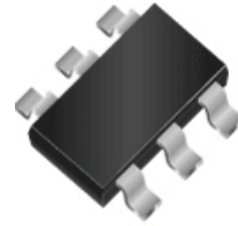
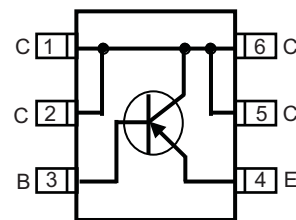
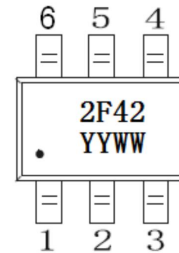


**WPT2F42**
**Single, PNP, -30V, -3A, Power Transistor**
[Http://www.willsemi.com](http://www.willsemi.com)
**Descriptions**

The WPT2F42 is PNP bipolar power transistor with very low saturation voltage. This device is suitable for use in charging circuit and other power management. Standard Products WPT2F42 are Pb-free and Halogen-free.


**SOT-23-6L**

**Pin configuration (Top view)**


2F42 = Device Code  
 YY = Year  
 WW = Week

**Marking**
**Features**

- Ultra low collector-to-emitter saturation voltage
- High DC current gain >100
- 3A continue collector current
- Small package SOT-23-6L.

**Applications**

- Charging circuit
- Power regulator
- Other power management in portable equipments

**Order information**

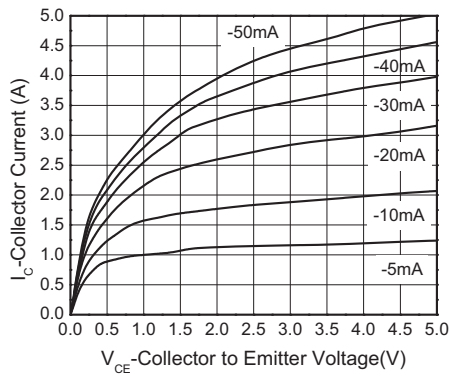
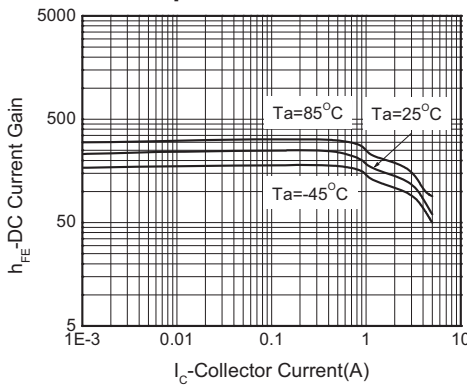
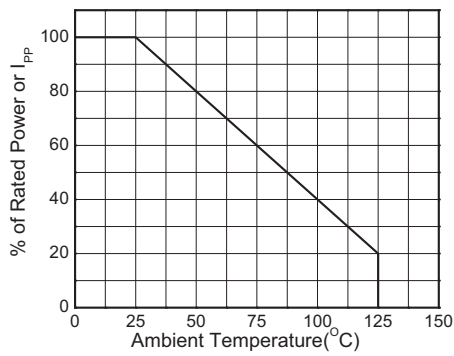
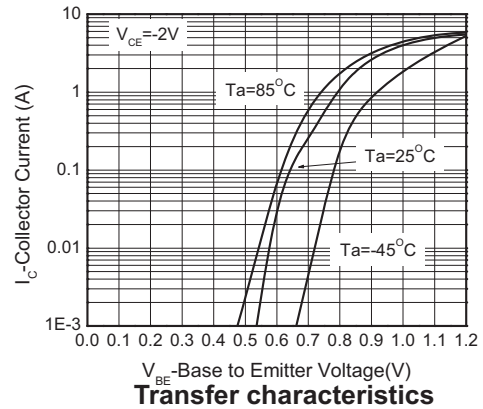
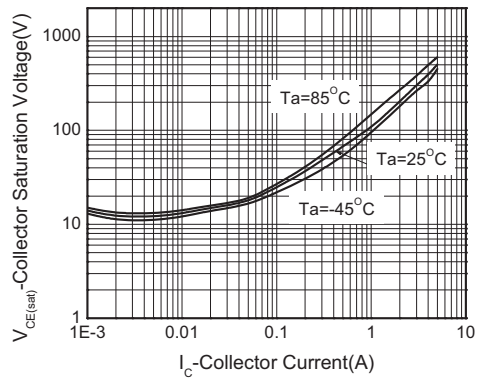
| Device       | Package   | Shipping       |
|--------------|-----------|----------------|
| WPT2F42-6/TR | SOT-23-6L | 3000/Reel&Tape |

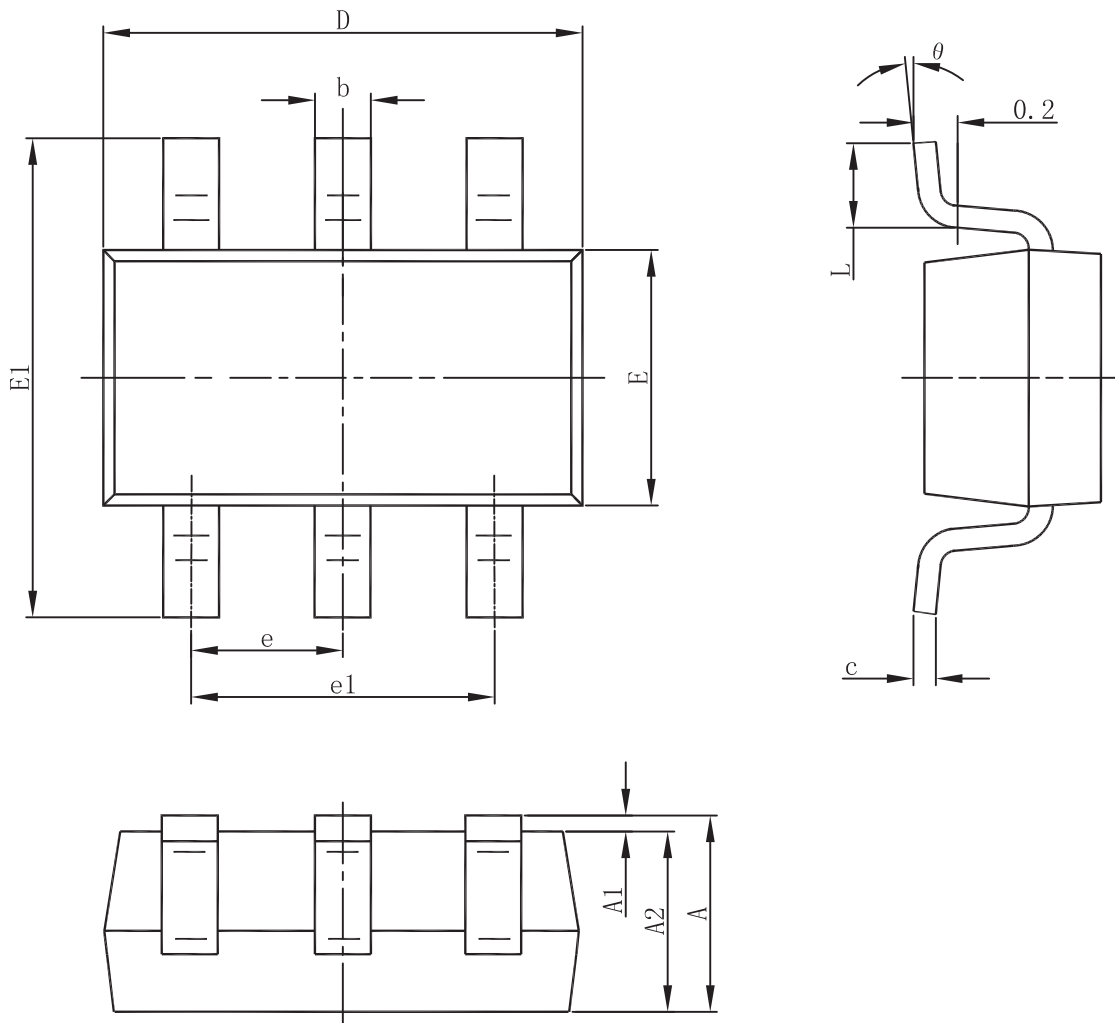
**Absolute maximum ratings**

| Parameter                   | Symbol    | Value      | Unit |
|-----------------------------|-----------|------------|------|
| Collector-emitter voltage   | $V_{CEO}$ | -30        | V    |
| Collector-base voltage      | $V_{CBO}$ | -30        | V    |
| Emitter-base voltage        | $V_{EBO}$ | -6         | V    |
| Continues collector current | $I_C$     | -3         | A    |
| Pulse collector current     | $I_{CM}$  | -6         | A    |
| Power dissipation @ 25°C    | $P_D$     | 2          | W    |
| Junction Temperature        | $T_J$     | 150        | °C   |
| Lead Temperature            | $T_L$     | 260        | °C   |
| Storage Temperature Range   | $T_{stg}$ | -55 to 150 | °C   |

**Electronics Characteristics (Ta=25°C, unless otherwise noted)**

| Parameter                            | Symbol        | Test Conditions          | Min. | Typ. | Max. | Unit |
|--------------------------------------|---------------|--------------------------|------|------|------|------|
| Collector-emitter breakdown voltage  | $BV_{CEO}$    | $I_C=-10mA, I_B=0mA$     | -30  |      |      | V    |
| Collector-base breakdown voltage     | $BV_{CBO}$    | $I_C=-1mA, I_E=0mA$      | -30  |      |      | V    |
| Emitter-base breakdown voltage       | $BV_{EBO}$    | $I_E=-100\mu A, I_C=0mA$ | -6   |      |      | V    |
| Collector cutoff current             | $I_{CBO}$     | $V_{CB}=-30V$            |      |      | -100 | nA   |
| Emitter cutoff current               | $I_{EBO}$     | $V_{EB}=-5V$             |      |      | -100 | nA   |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=-2.0A, I_B=-200mA$  |      |      | -0.5 | V    |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C=-2.0A, I_B=-200mA$  |      | -1.0 | -1.5 | V    |
| Base-emitter forward voltage         | $V_{BE(on)}$  | $I_C=-0.5A, V_{CE}=-2V$  |      | -0.7 | -1.0 | V    |
| DC current gain                      | $h_{FE}$      | $I_C=-1.0A, V_{CE}=-2V$  | 100  |      | 300  |      |

**Typical Characteristics (Ta=25°C, unless otherwise noted)**

**Output characteristics**

**DC current gain**

**Power Derating**

**Transfer characteristics**

**C-E saturation voltage vs. Collector current**

**Package outline dimensions**
**SOT-23-6L**


| Symbol   | Dimensions In Millimeters |       |
|----------|---------------------------|-------|
|          | Min.                      | Max.  |
| A        | 1.050                     | 1.250 |
| 10       | 0.000                     | 0.100 |
| A2       | 1.050                     | 1.150 |
| b        | 0.300                     | 0.500 |
| c        | 0.100                     | 0.200 |
| D        | 2.820                     | 3.020 |
| E        | 1.500                     | 1.700 |
| E1       | 2.650                     | 2.950 |
| e        | 0.950(Basic)              |       |
| e1       | 1.800                     | 2.000 |
| L        | 0.300                     | 0.600 |
| $\theta$ | 0°                        | 8°    |